
Kakaako Community Development District

Makai Area Plan



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Hawaii Community Development Authority

November 2002



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1.0 INTRODUCTION

The area commonly known as Kakaako occupies a very important location in the center of urban Honolulu, lying strategically between the downtown area, the densely populated Makiki district, Waikiki and Honolulu Harbor (*Figure I-1*). Despite its prime location and its economic importance to the State of Hawaii, Kakaako remains relatively underdeveloped, with aging streets, utility systems and buildings.

Recognizing Kakaako for what it is today, and what it could be in the future, the State Legislature created the Hawaii Community Development Authority (HCDA) in 1976. As codified in Chapter 206E, Hawaii Revised Statutes, the Legislature found the need for a mechanism or methods that could initiate and guide the timely revitalization of underdeveloped urban communities in the State. The Legislature named Kakaako as HCDA's first Community Development District.

In 1982, the Legislature amended the Kakaako Community Development District boundaries to include a portion of the Kakaako Peninsula, makai of Ala Moana Boulevard. This area, which is referred to as the Makai Area, was assigned to HCDA for planning and redevelopment and has the unique distinction of being primarily public land. Over the past decade the designated boundaries of the Makai Area have been modified several times and plans have been adjusted accordingly.

The major change that continues to guide development in this area today occurred in 1987 when the State, under the auspices of the Governor's Office of State Planning, launched a major "waterfront reawakening" effort. This effort resulted in the publication in 1989 of the Honolulu Waterfront Master Plan, a comprehensive, long-range development program for the revitalization of the Honolulu urban waterfront, a six-mile coastal stretch extending from Honolulu International Airport to the Ala Wai Yacht Harbor on the outskirts of Waikiki. The redevelopment of the Makai Area was viewed as an integral part of the State's waterfront revitalization program.

The Makai Area extends from Kewalo Basin to Honolulu Harbor and to the ocean. Also included is the parcel bounded by Nimitz Highway, Bishop and Richards Streets, and Ala Moana Boulevard. The majority of the Makai Area is currently used for bulk loading maritime and light industrial warehouse use, and is recognized in the Waterfront Master Plan as having immense potential for both commercial development and public waterfront access. The master plan proposed an extensive program of parks, waterways, and other public amenities to be funded largely from revenues derived from the on-site development of 7.5 million square feet of commercial space. This vision was subsequently incorporated into HCDA's 1990 Makai Area Plan and Rules.

Since the late 1980s the State economy has weakened considerably. While the goal of the Honolulu Waterfront Master Plan to create an active, people-oriented place is just as valid today, the condition of the economy required a hard look at the assumptions regarding commercial development on the land, and the ability to generate revenues to fund public amenities. In 1994, HCDA embarked on a comprehensive revision of its development strategy for the Makai Area in response to changes in the State's economy and a reassessment of land uses, urban design and transportation systems in the area. Since that time, additional studies have been conducted to fine-tune the proposed Plan. Overall, there was the desire to carefully balance public costs with revenues from private development and, at the same time, to create a more lively urban environment and improve vehicular and pedestrian flow through the area. Some of the major components of the 1990 Makai Area Plan, such as the system of inland waterways, beach park, and large amphitheater, were reevaluated and deleted from the Plan. Similarly, the market for

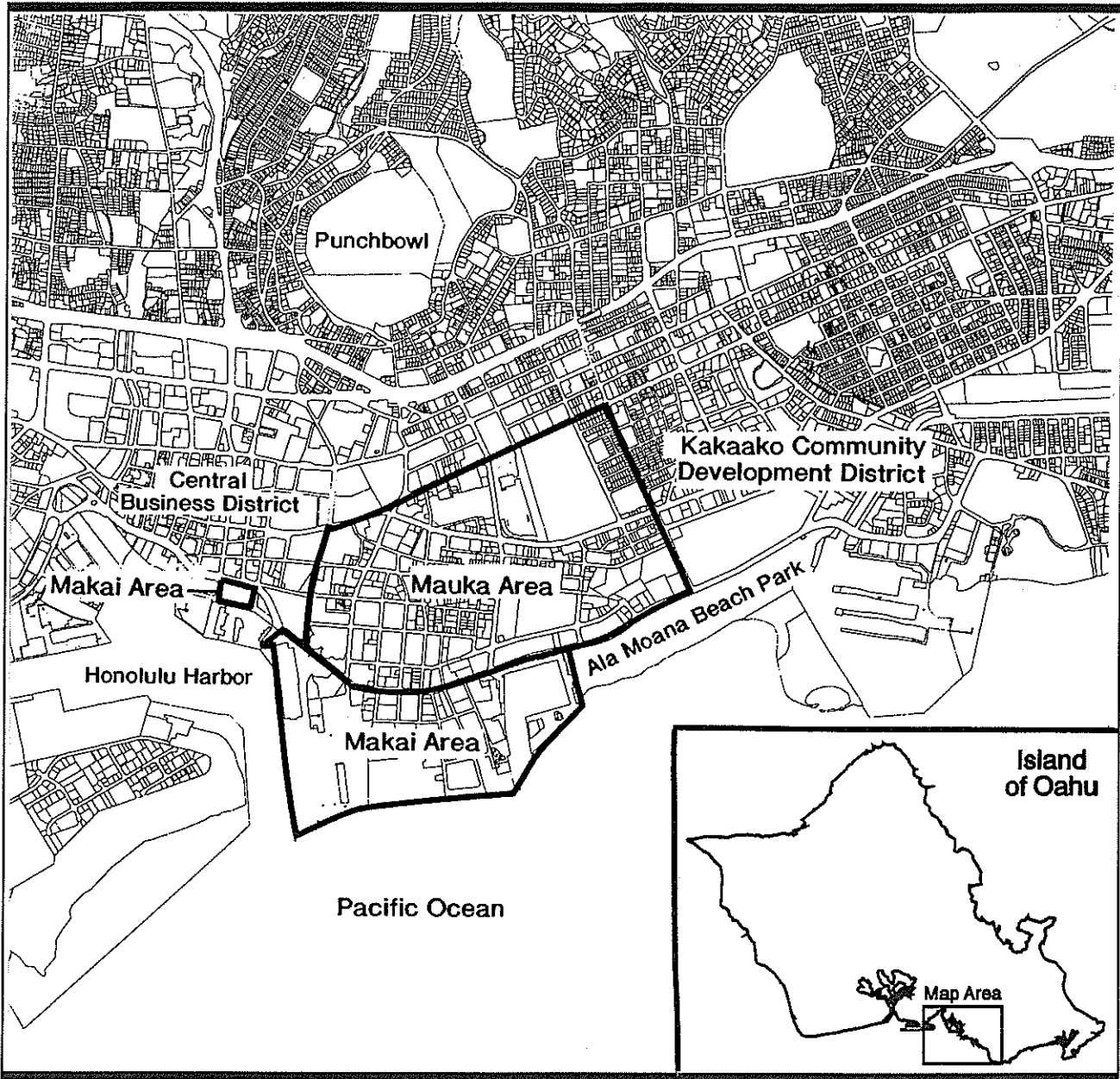
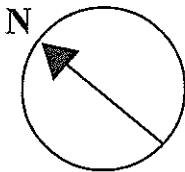


Figure I-1
Makai Area Context Plan



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commercial development was revisited and new conclusions were drawn. These revised concepts are the basis for the Makai Area Plan.

The Makai Area offers a dramatic location, proximity to downtown, and a substantial amount of land under State control. The Makai Area Plan describes how these advantages can contribute to the larger goal of diversifying Hawaii's economy, and still serve as the people-oriented place envisioned in 1989.

1.1 Makai Area History and Existing Conditions

Throughout Hawaiian history, the part of Honolulu called Kakaako provided resources for a variety of peoples. Although its history includes a record of flooding, through progressive landfilling and improvements over the span of two centuries, the district has endured, as well as grown.

Honolulu harbor originally consisted of a small reefed basin, and the shoreline in what is now Kakaako was approximately where Auahi Street is today. What is now known as the Kakaako Peninsula was a shallow reef area, and the fast land was characterized as a marsh and was used for the collection of thatch.

Prior to western contact, native Hawaiians were unconcerned with developing the natural harbor because the shallow waters did not affect canoe transport. However, after 1819 the market was open for sandalwood and the need for mooring led to the first man-made reconfiguration of the harbor. Following the exhaustion of the sandalwood trade, the Hawaiian mercantile system shifted to the whaling industry. From 1843 - 1860, the whaling industry was at its peak and the need for more harbor space developed. Harbor modifications began in 1848 in what is now the downtown area.

These modifications greatly affected Kakaako and highlights of the changes are as follows:

- 1900 - Piers 1 and 2 are documented as in use and the Ala Moana area was converted into a dump site. The Ala Moana Sewage Pump Station, designed by O. G. Traphagen, is constructed.
- 1920 - A concrete wharf is built at Pier 2.
- 1921 - Kewalo Basin is established as a dock facility for lumber schooners but, as the industry fades, the newly developing fishing industry takes over.
- 1928 - A permit is issued to dredge a channel from Kewalo to Waikiki.
- 1934 - The U. S. Immigration Administration Building near Fort Armstrong designed by C. W. Dickey and Herbert Cayton is completed.
- 1947 - By 1947 approximately 110 acres of the Kakaako peninsula have been filled with coral landfill.

- 1948 - A seawall is built 500 feet out from and parallel to the shoreline, and runs from the edge of Kewalo Channel, parallel to the coast down to Fort Armstrong. This wall defines the edge of the landfill.
- 1977 - The refuse landfill site is closed permanently.

One of the first major economic successes in the area was the Honolulu Iron Works, begun in 1853 by David M. Weston, one of the first industrialists to foresee the benefits of a sugar mill, metal and machine shop in growing Honolulu. Other facilities, such as the Leper Hospital at Fisherman's Point, developed along with a growing residential community. The early 1900s shantytown of immigrant laborers continued to grow, eventually reaching about 5,000 people by 1940. The post-World War II era changed the area from a residential to a commercial and industrial district, transforming the character of Kakaako to industrial and service industries. This warehouse/industrial building character describes the Kakaako of today.

1.2 The Physical Environment

1.2.1 Climate

The climate of the Makai Area, similar to that of other coastal areas in Honolulu, is characterized by abundant sunshine, persistent trade winds, relatively constant temperatures, and moderate humidity. The mean temperature in Honolulu ranges from 73 degrees Fahrenheit (°F) in winter to 81° F in the summer. The mean annual rainfall is approximately 23 inches with most of the rainfall occurring between the months of November and April. Relative humidity ranges between 56 and 72 percent. Cooling trade winds from the northeast prevail throughout most of the year; occasionally Kona winds from the southwest bring warm, humid air.

1.2.2 Geography, Soils and Topography

The Kakaako Peninsula lies on the Honolulu coastal plain, an emerged fossil reef formed approximately 120,000 years ago (MacDonald and Abbott, 1970). The Makai Area is underlain by a coral layer between 5 and 20 feet below mean sea level (*Figure I-2*). Soft lagoonal deposits made of sand, silt, and clay are found above the ancient reef, mainly in a buried stream channel which extends below Ala Moana Boulevard between Keawe and Ohe Streets to the ocean. Soft alluvial soils within the channel area extend to depths of 50 to 65 feet below sea level. These deposits are covered by 5 to 10 feet of dredged coral fill.

The substrata conditions of the Makai Area, as shown in *Figure I-3*, are rated "average" for development purposes in all areas except in the general area of the buried stream channel where the substrate condition is "poor." The terrain of the Makai Area is generally at an elevation of 14 feet above mean sea level and flat, except for the debris mound formed between 1927 and 1977. Originally rising 15 to 55 feet above sea level, the 1,700 feet x 400 feet mound was resculptured in conjunction with Phase I of the Kakaako Waterfront Park, and has become one of its

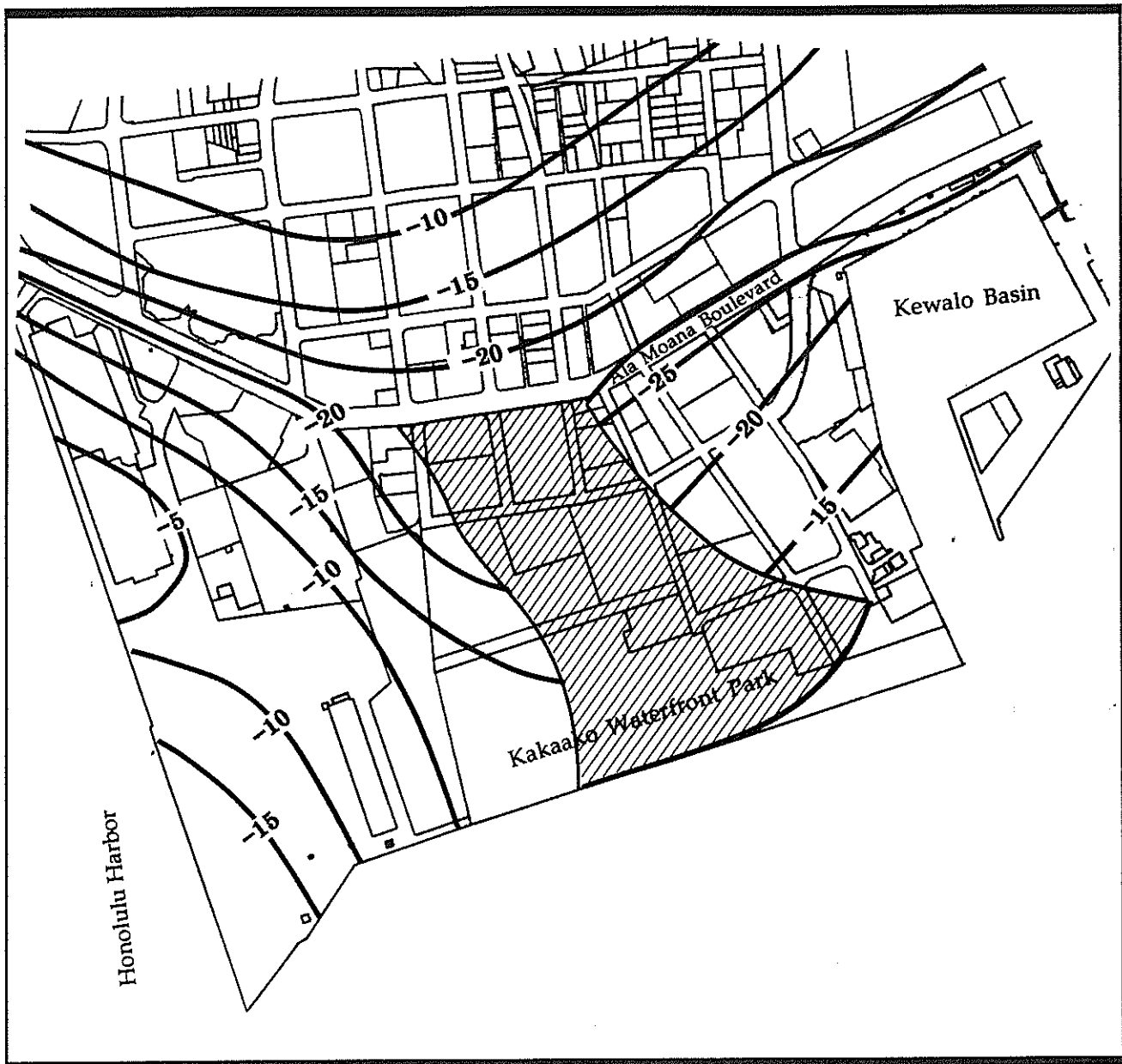


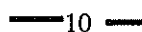
Figure I-2
Coral Subsurface Condition



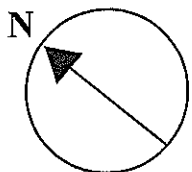
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Alluvial Channel



Contours of Coral Surface



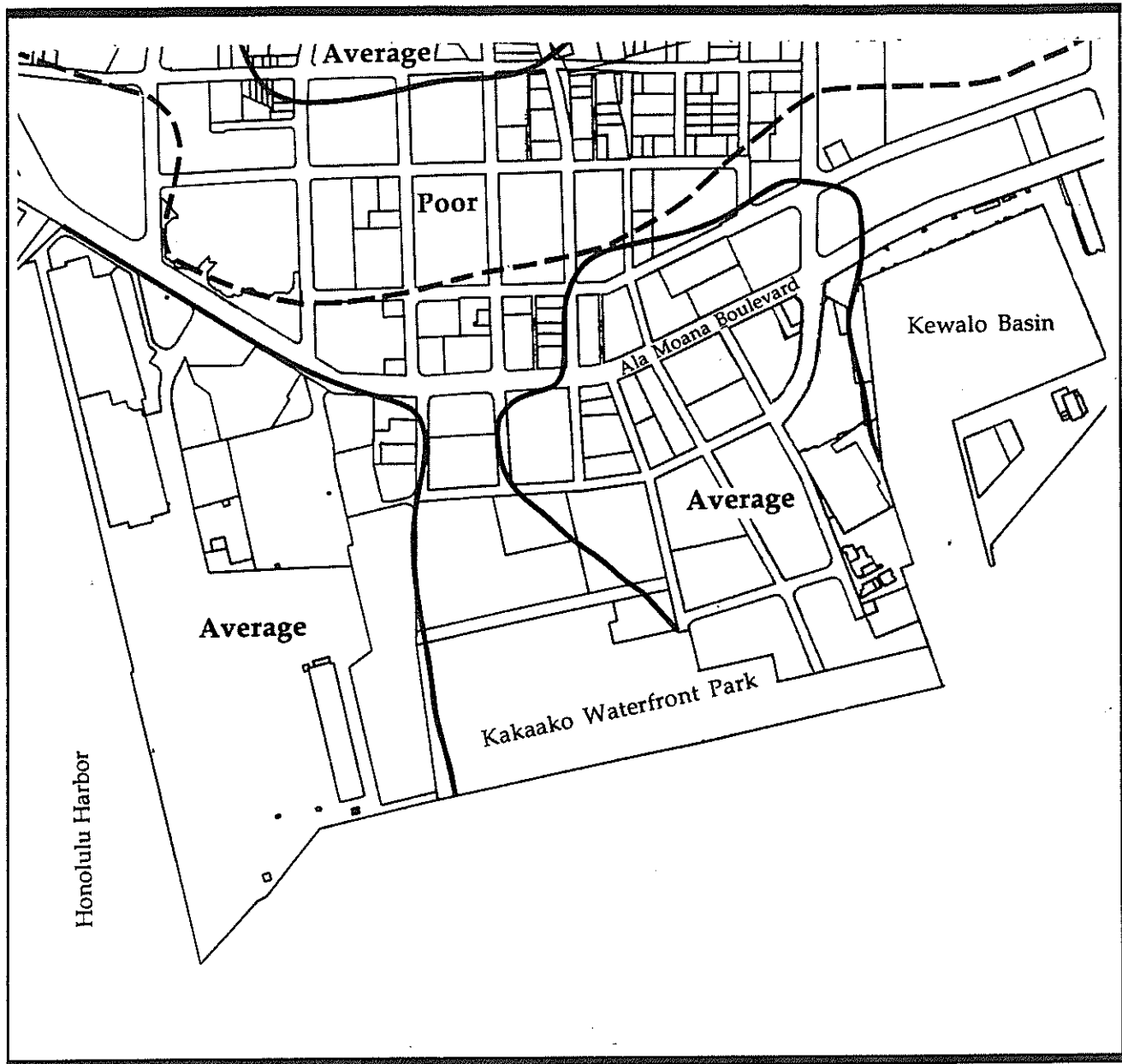
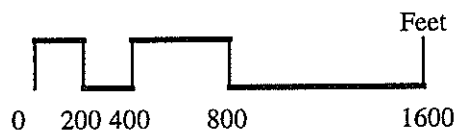
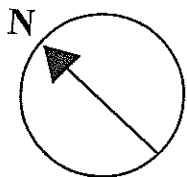


Figure I-3
Substrata Condition



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--- Limits of Former Shoreline



Source: Kakaako Community Development District
Plan, 1981

most prominent features. The highest point is currently 53 feet above mean sea level.

1.2.3 Hydrology and Drainage

Southern Oahu's coastal plain, which includes the Kakaako Peninsula, is underlain by sedimentary deposits that form a caprock which retards the seaward movement of fresh ground water from the basal aquifer. The caprock extends along the coastline about 800 to 900 feet below sea level.

Urbanization of the Kakaako District has increased runoff to the nearshore coastal waters. Although roadway and drainage improvements have been undertaken, much of Kakaako is still subject to localized flooding due to flat topography and inadequate drainage facilities. The runoff from the Makai Area flows into the ocean via the Keawe Street open channel, Kewalo Basin and Honolulu Harbor. The Keawe Street open channel is lined and is approximately 30 feet wide, 15 feet deep and 650 feet long, and is located between the Foreign Trade Zone and the Kakaako Waterfront Park. *Figure I-4* shows flood zones in the Makai Area.

1.2.4 Solar Orientation and Prevailing Winds

In Kakaako, the streets are generally oriented southeast to northwest (Ewa-Diamond Head) and southwest to northeast (mauka-makai) (*Figure I-5*). Prevailing winds are from the northeast and are illustrated in relationship to the street grid.

1.2.5 Offshore Conditions

The south shore of Oahu is sheltered from the predominant northeast tradewind-generated waves as well as the winter North Pacific swell. Wave activity at the shore is relatively mild, except during the summer months when southern swell can produce moderately high surf conditions. The south shore is also exposed to infrequent Kona storms and hurricane waves approaching from the southeast through southwest directions. Shallow fringing reefs once protected the natural shoreline from deepwater wave energy. However, the present shoreline has been created by filling seaward over the shallow reefs, requiring shore protection measures to stabilize the existing shoreline. Three surf sites front the Kakaako Peninsula,

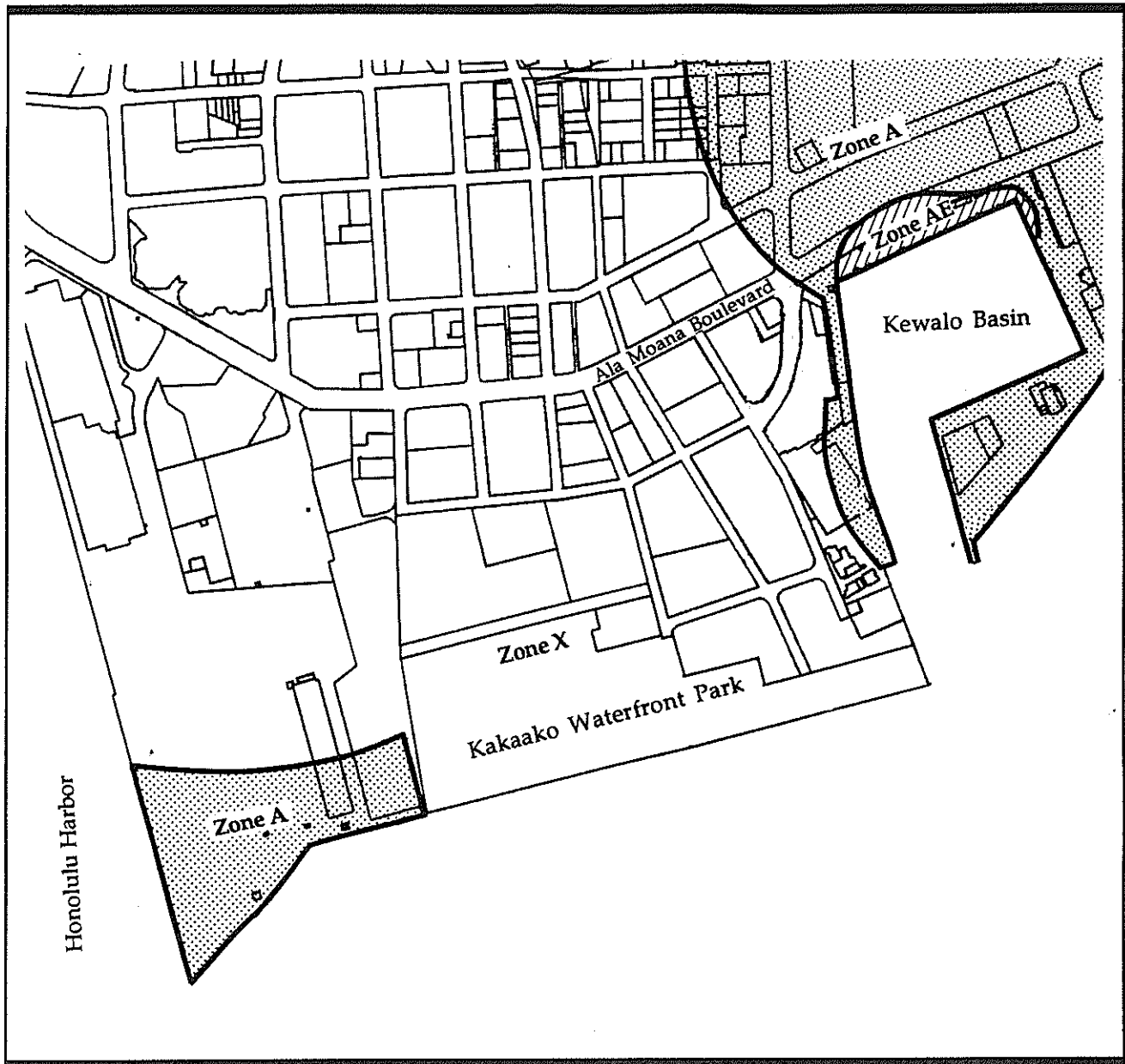
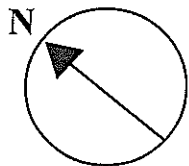


Figure I-4
Flood Hazard Map



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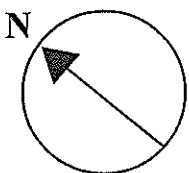
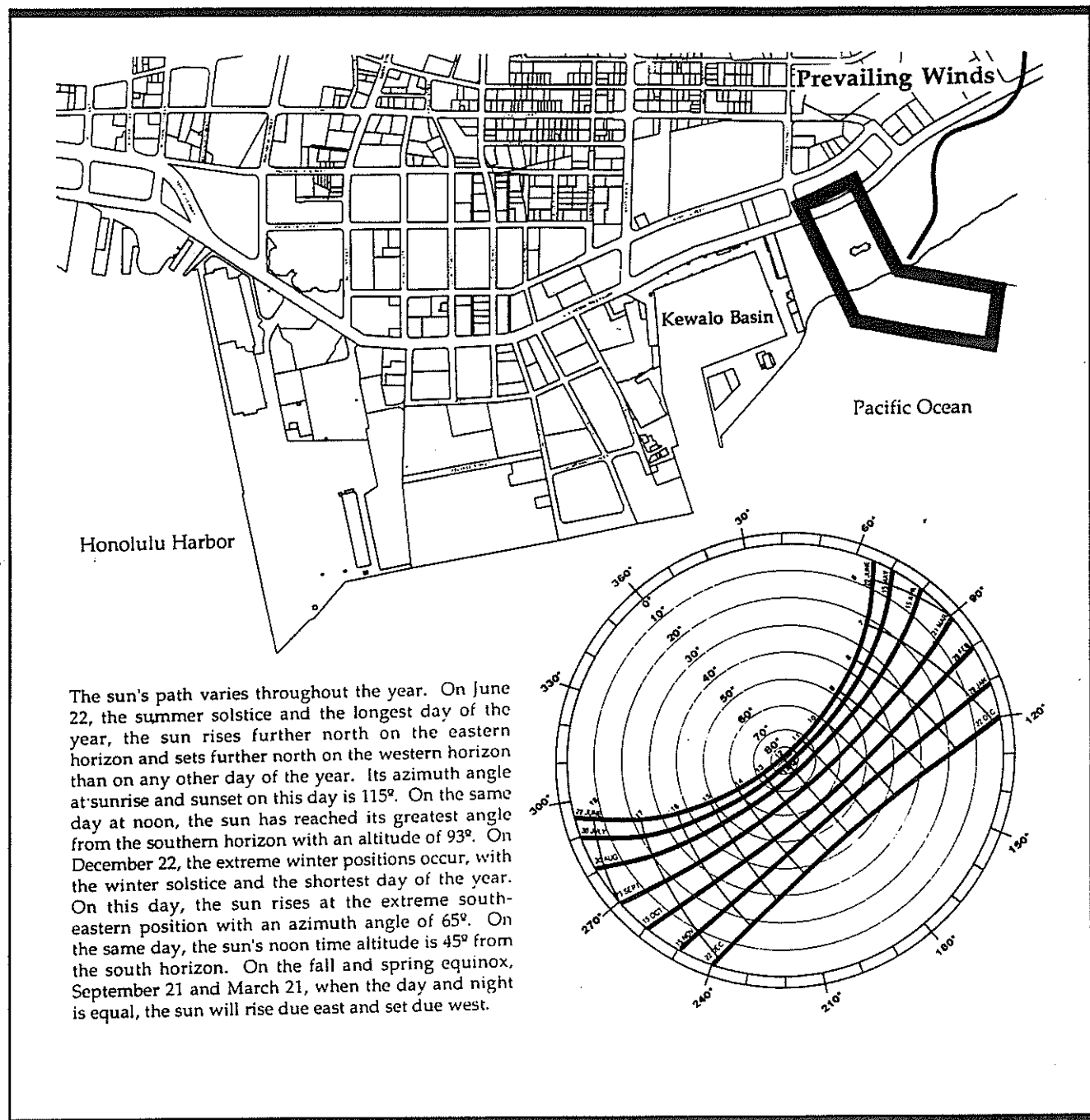
Zone A - No Base Flood Elevations Determined



Zone AE - Base Flood Elevations Determined (El 4)

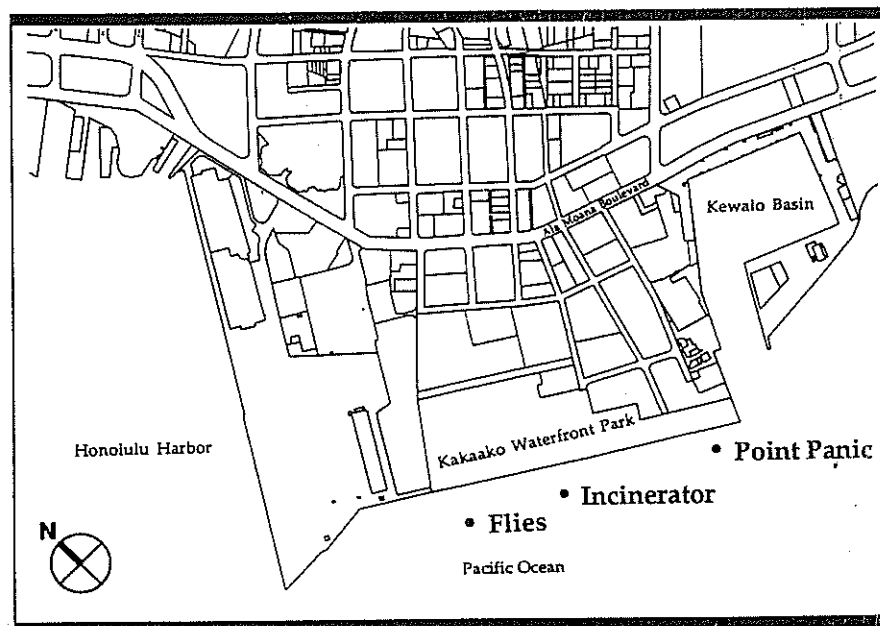


Zone X - Areas Determined to be Outside 500-Year Flood Plain



Source: Consumer Education Project of Hawaii, 1979. The House in the Sun-Solar Conscious Architecture for Hawaii and the Tropics.

"Flies," "Incinerators," and "Point Panic," the names of which are reflective of the former adjacent land uses and the proximity of the wave break to the shore. The nearshore currents are predominantly driven by the tides and winds and in general are weak. (Reference: Technical and Environmental Studies for the Kakaako Beach Park.)



The Kakaako nearshore reef is relatively flat, consolidated limestone rubble bottom. The reef is of marginal aesthetic appeal and supports only limited benthic and reef fish communities. The greatest diversity and abundance of fish occur offshore the east sector near the Kewalo Basin channel, where a total of 65 species of fish have been noted.

Nearshore coastal waters from Ala Moana Beach to the easterly entrance channel of Honolulu Harbor are designated "Class A" State waters by the State Department of Health (DOH), while Honolulu Harbor and Kewalo Basin are designated "Class A" embayments. According to DOH, waters classified "A" are to be protected for recreational uses, aesthetic enjoyment, and propagation of marine life.

1.2.6 Views

Existing views in the Makai Area are limited due to the large warehouses and the land form at the Kakaako Waterfront Park. There are very few views of the ocean from the existing interior streets. The best views are from Ala Moana Boulevard to Kewalo Basin, from Kewalo Basin Park along the shoreline, from Kakaako Waterfront Park along the shoreline, from the Kakaako Waterfront Park lookout point in all directions, and on local streets toward the mountains. An enhanced mauka-makai view corridor along Cooke Street will also be created with the implementation of a promenade and generous setbacks (*Figure I-6*).

1.3 Landownership

Of the total 221 acres, approximately 201 acres are owned by the State of Hawaii. Landownership is illustrated in *Figure I-7* and includes the following areas:

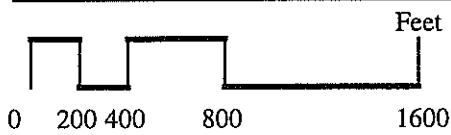
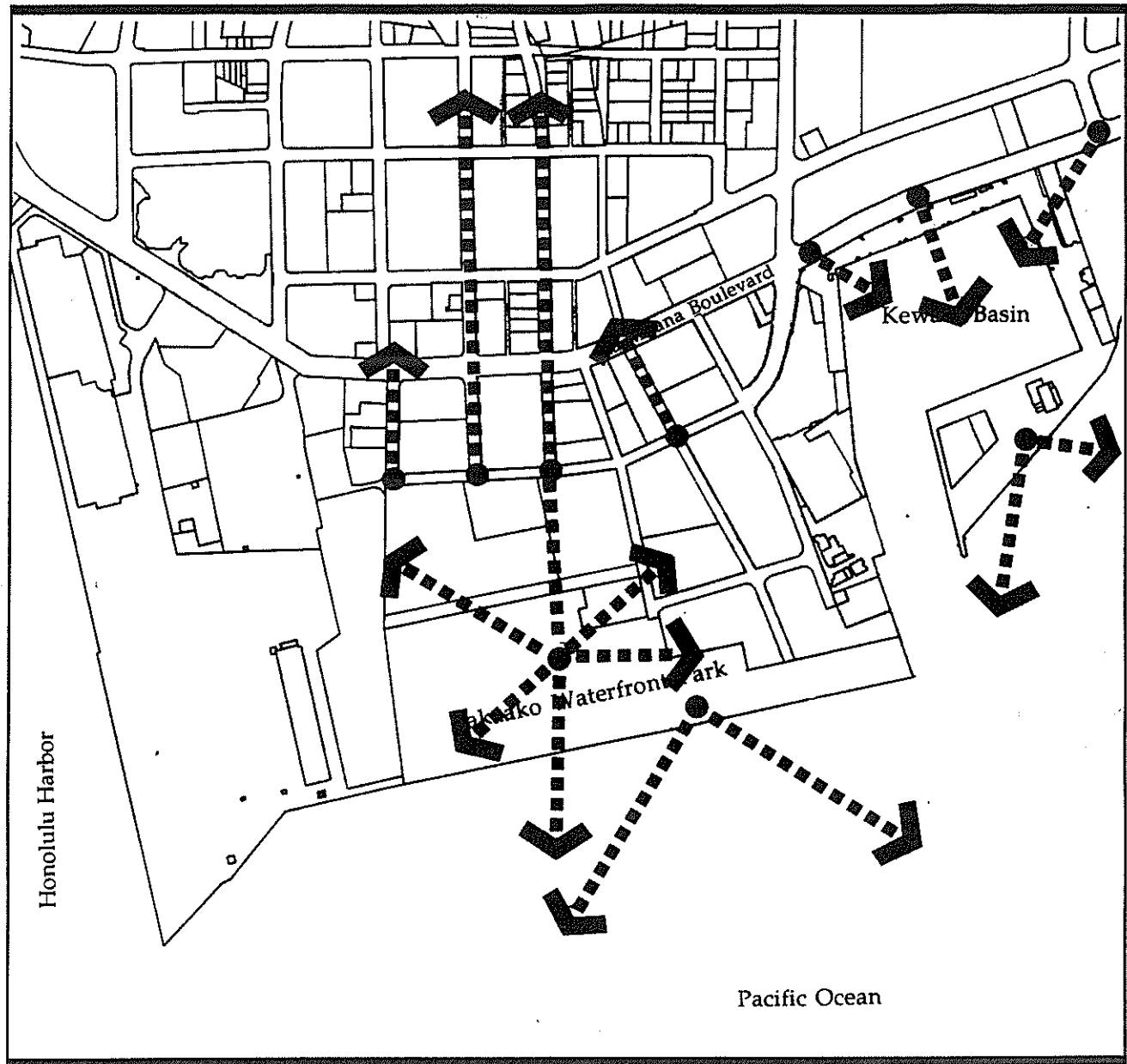
	<u>Acres</u>
State of Hawaii*	195.0
Kamehameha Schools/Bernice Pauahi Bishop Estate	12.0
Federal Government	4.6
Hawaiian Electric Company, Inc.	3.4
Additional Circulation	<u>6.0</u>
TOTAL	221.0

* Various rights-of-way are owned by the City and County of Honolulu.

As the major landowner in the Makai Area, the State of Hawaii allows various land uses through executive order, general lease, or revocable permit. Executive orders are issued by the Governor and allow government agencies to utilize State-owned land for a specified public purpose. General leases are issued by the Department of Land and Natural Resources, Department of Transportation, Department of Business, Economic Development & Tourism or HCDA and allow tenants to occupy State-owned land for a specified purpose and term, not to exceed 65 years. Revocable permits allow tenants to occupy State-owned land for a specified purpose on a month-to-month basis.

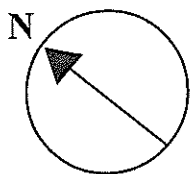
1.4 Current Land Uses

At present, the general mix of land uses in the Makai Area consists of: maritime industrial, cargo and warehousing operations at Fort Armstrong; car dealerships, light industrial, public facilities, and commercial office activities in the central portion of the peninsula; and the new Kakaako Waterfront Park. The Kewalo Basin area provides the primary berthing location for Oahu's commercial fishing fleet, excursion boats, and charter fishing boats. Landside activities surrounding the harbor include maritime support operations, marine research, and commercial restaurant operations.



Legend

● - - - - - ➔ Views



**Figure I-6
Existing Views Diagram**

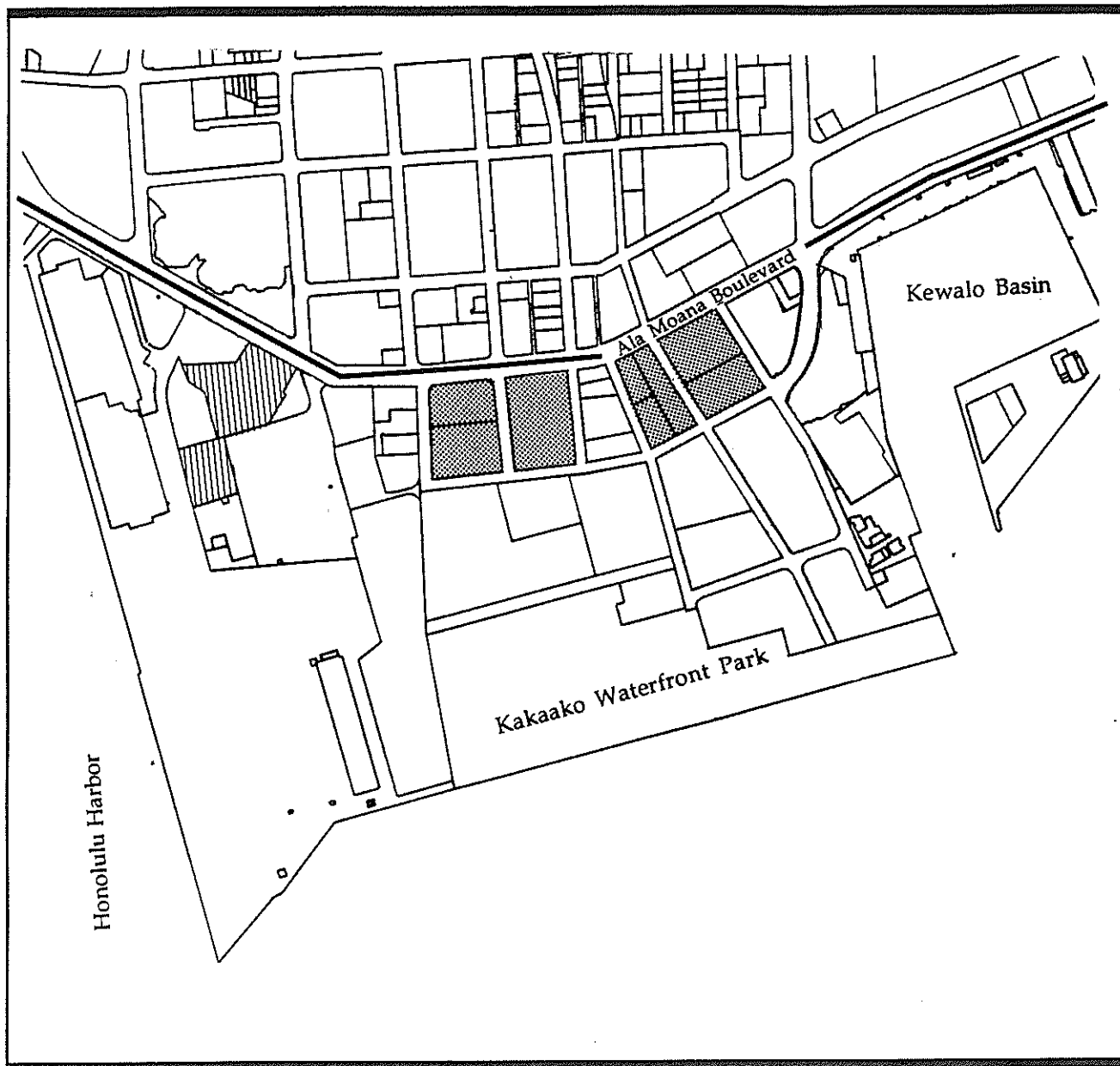
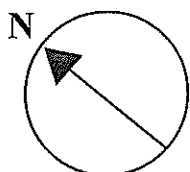
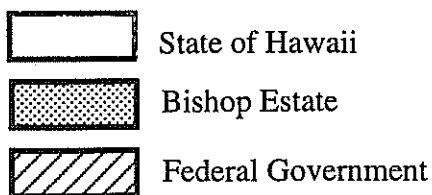


Figure I-7
Land Ownership Map



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Kakaako Peninsula

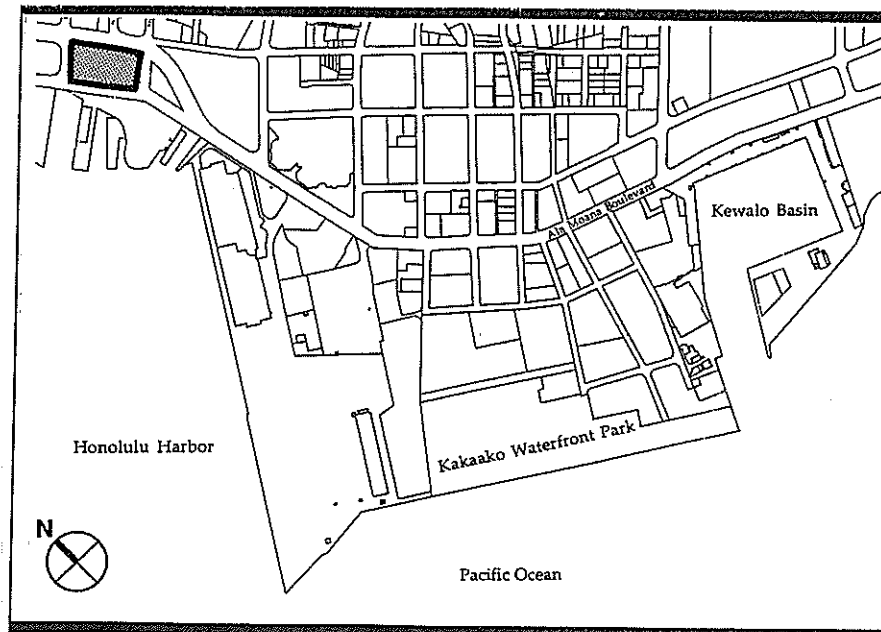
The Kakaako Peninsula lies between Kewalo Basin and Honolulu Harbor, on largely man-made land. Maritime industrial uses occupy the Fort Armstrong area at Piers 1 and 2. This area, once the primary container cargo facility on Oahu, is currently dedicated to maritime break-bulk and limited container cargo operations, ship maintenance operations, and the Foreign Trade Zone warehouse and offices.

Commercial uses occupy much of the central portion of the peninsula and include new and used car sales businesses and offices. Recreational uses include the 30-acre waterfront park located adjacent to Point Panic, a popular site for body surfers. Marine research activities include the Pacific Biomedical Research Center [and the University of Hawaii Look Laboratory.] located adjacent to the entrance to Kewalo Basin.

The Kakaako Peninsula also accommodates a number of public facilities including the City and County of Honolulu equipment storage and maintenance areas, DOH, and the Ala Moana Wastewater Pump Station. [The State Department of Agriculture (DOA) Plant Quarantine Station and Weights and Measures Branch are also located within the Makai Area.] Three historic structures include the U. S. Immigration Station, the DOH building and the former Ala Moana Sewage Pump Station.

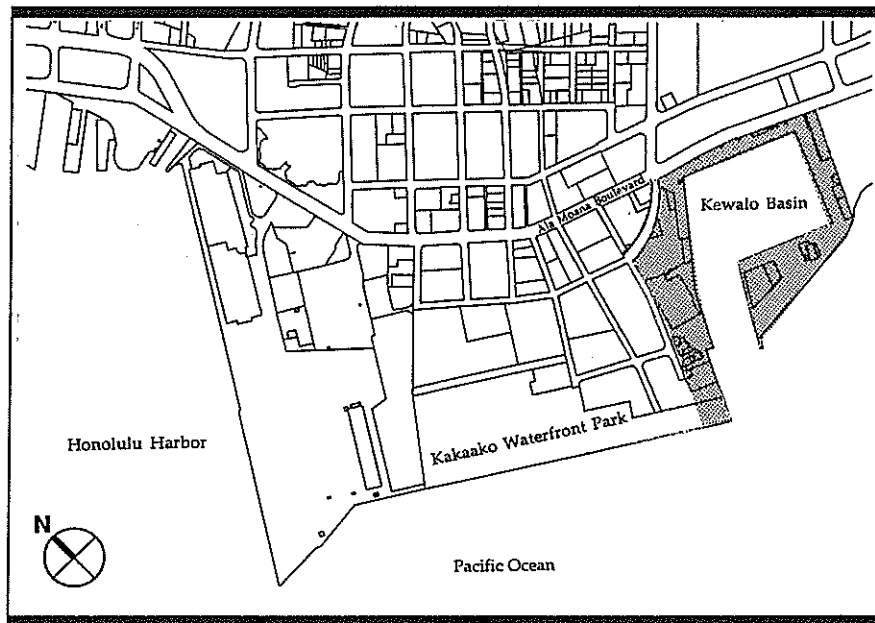
HECO Parcel

The Hawaiian Electric Company, Inc. (HECO) parcel, TMK: 2-1-14: 4, includes 3.4 acres. The parcel is bounded by Nimitz Highway, Bishop and Richards Streets and a former portion of Ala Moana Boulevard, and is occupied by the Honolulu Power Plant.



Kewalo Basin

Kewalo Basin includes 25 acres of land and 30 acres of water area. Existing uses include John Dominis Restaurant, a fish auction operation, a dry-dock and shipyard facility, and Fisherman's Wharf Restaurant. Facilities adjacent to Ala Moana Park include [a marine fuel station,] the Kewalo Basin Marine Mammal Laboratory, National Marine Fisheries Service research laboratory, State Department of Transportation Harbors Division (DOT-Harbors) Kewalo office and the Kewalo Basin Park.



1.5 Review of Development Concepts

Plans Prior to 1982

As stated earlier, in 1982 the Kakaako Community Development District boundaries were expanded to include land makai of Ala Moana Boulevard. Prior to this time, development for what is now the Makai Area was regulated by the City and County of Honolulu. Zoning for the area was divided into public open space and industrial use, with smaller areas designated for housing/commercial use along Ala Moana Boulevard and commercial development along Kewalo Basin. The height limit was restricted to 200 feet, with an emphasis on preserving mauka-makai sight lines, as well as integration with the surrounding areas of Kakaako (*Figure I-8*).

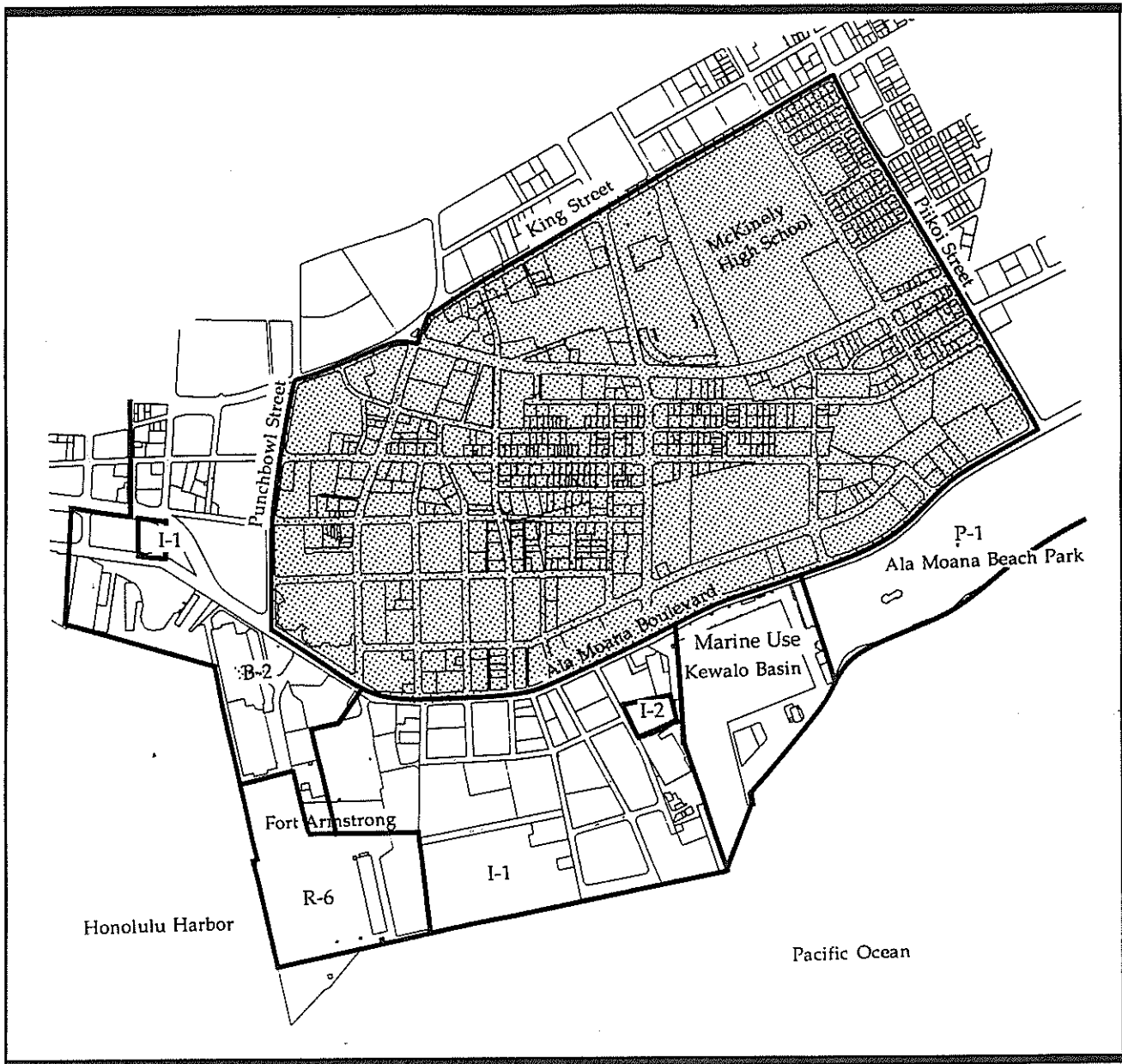

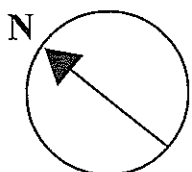


Figure I-8
Plans Prior to 1982



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-  HCDA Boundary
- R-6 Residential (C&C)
- B-2 Community Business (C&C)
- I-1 Light Industrial (C&C)
- I-2 Heavy Industrial (C&C)
- P-1 Preservation (C&C)



1982 - 1985 HCDA Plans

With the 1982 expansion of the Kakaako Community Development District to include approximately 133 acres of land makai of Ala Moana Boulevard, HCDA developed more specific, in-depth plans for the entire District, issuing a revised Plan in October 1983 (*Figure I-9*).

Concerns unique to the Makai Area were further articulated in additional revisions to the Plan in 1985, and included:

- Recognition of harbor uses at the Fort Armstrong area.
- A central residential area.
- The preservation of scenic views.
- A 30-acre proposed waterfront park at the end of the Kakaako Peninsula.
- The Makai Area as a potential relocation site for displaced Kakaako Mauka Area businesses.

With this Plan, HCDA began to differentiate the Makai Area planning needs as separate from, but integrated with, the larger picture of Kakaako.

1986 - 1990 HCDA Plans

The next major change occurred in 1987, when the Kakaako District boundaries were again amended to include all lands makai of Ala Moana Boulevard from Ala Moana Park to Aloha Tower. This expanded the Makai Area from 133 acres to 227 acres (*Figures I-10 and I-11*). However, in 1990, the lands between Piers 4 and 8 were reassigned to the Aloha Tower Development Corporation, except for the property occupied by HECO makai of Nimitz Highway. This change in the Makai Area boundaries, to 221 acres, also brought revisions to the Makai Area Plan.

Residential and industrial uses were eliminated in the Makai Area. This zoning change stemmed from recommendations in the Honolulu Waterfront Master Plan of 1989 which concluded that the waterfront area would be better utilized as a major recreational, people-oriented activity area with a significant amount of commercial development. Other major ideas added to the original development concepts of 1982 - 1985 included the:

- Relocation of many existing uses to Sand Island, Kapalama, and Honolulu Harbor.
- Revision of the roadway system to include a Cooke/Ohe couplet of one-way streets.
- Expansion of Ala Moana Park into Kewalo Basin.

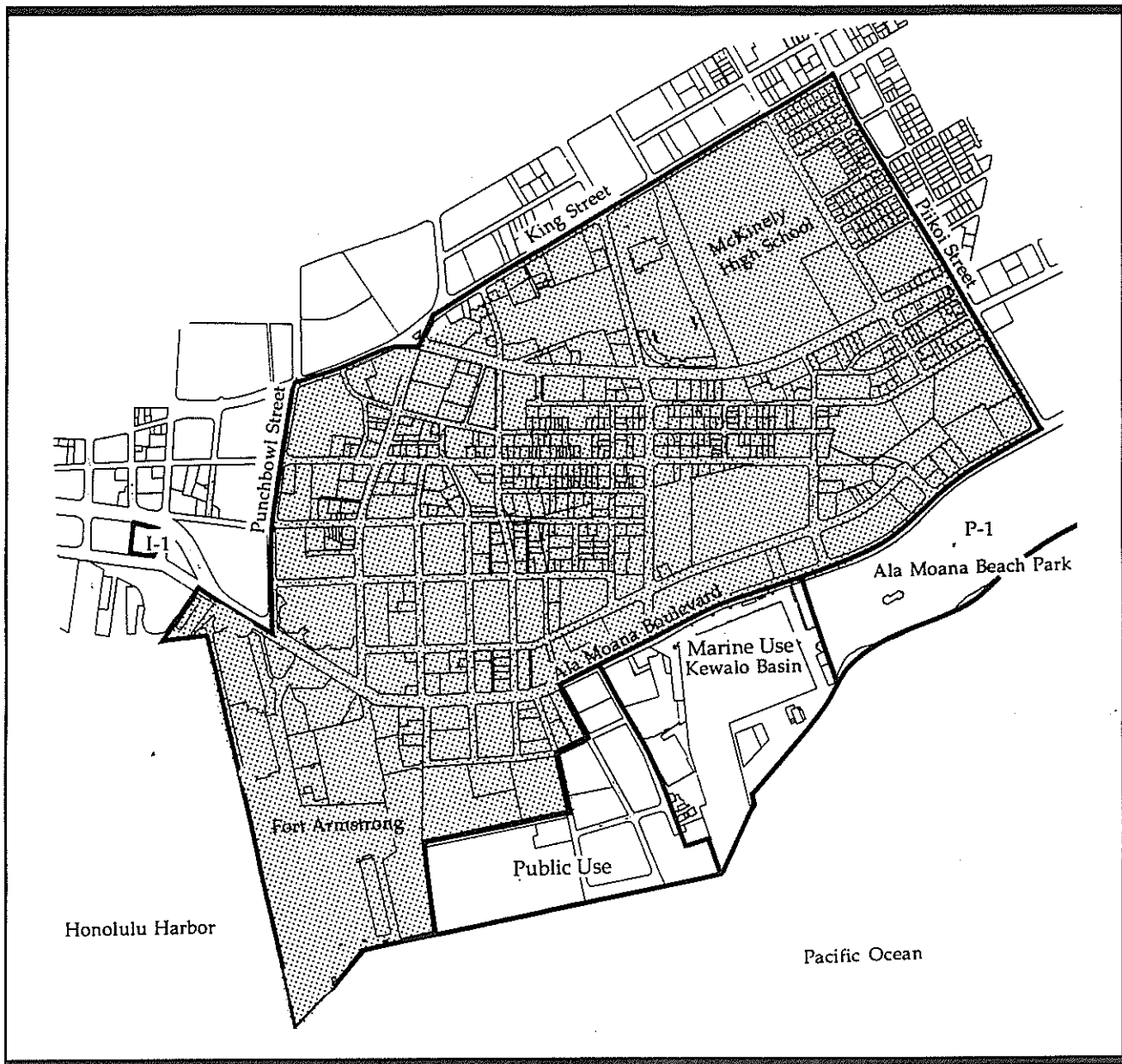
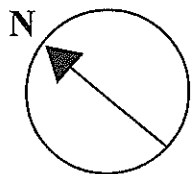
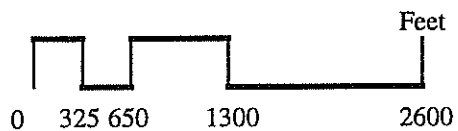


Figure I-9
1982 - 1985 Plan



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HCDA Boundary

I-1

P-1

Light Industrial (C&C)

Preservation (C&C)

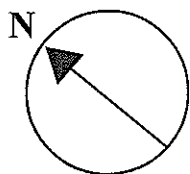
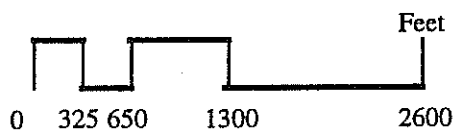
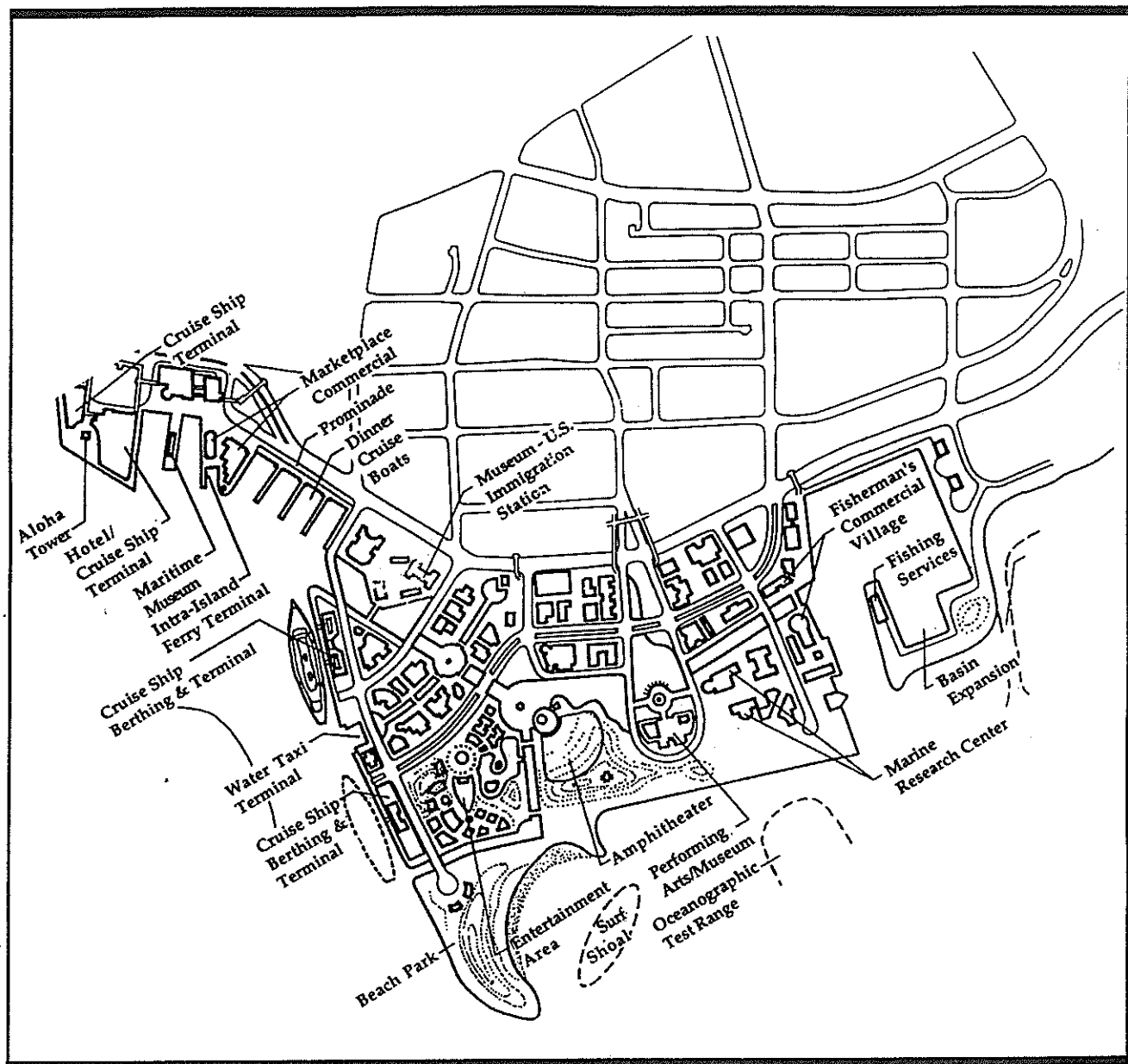


Figure I-10
1989 Waterfront Concept Plan

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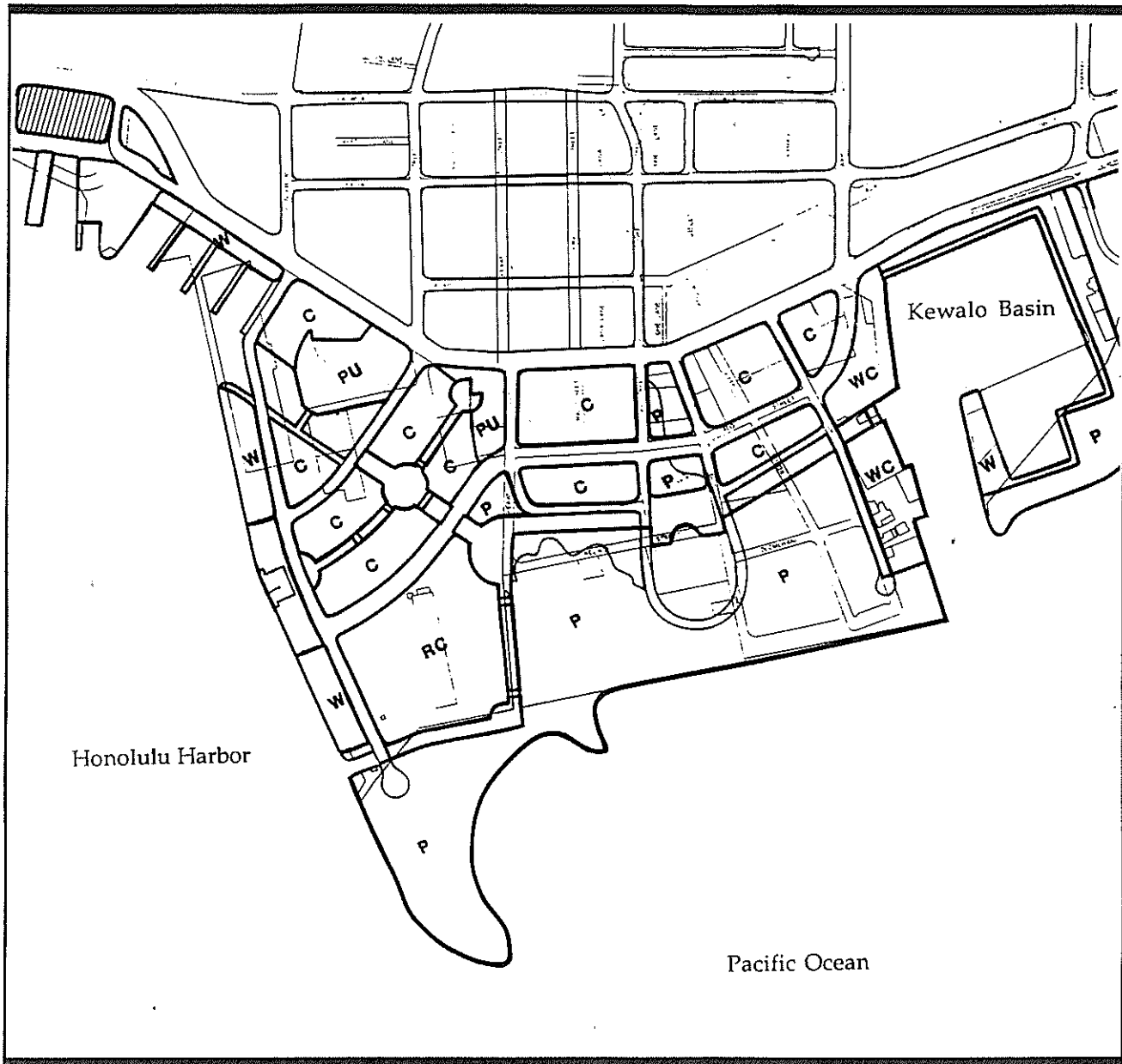
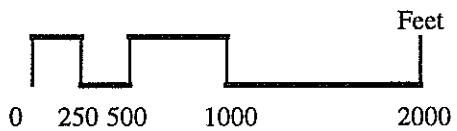


Figure I-11
1990 Makai Area Plan

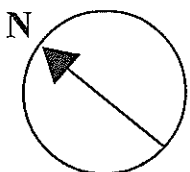


Legend

- P** Park
- PU** Public
- C** Commercial
- W** Waterfront Service
- WC** Waterfront Commercial
- RC** Recreational Commercial



Aloha Tower Special District



- Creation of an inland waterway system.
- Provision for cultural and educational facilities within the waterfront park.
- Passenger cruise ship terminals at Piers 1 and 2.

These refinements to the Plan were based on updated market, traffic engineering and port planning studies conducted by HCDA in association with the Office of State Planning as part of the larger Honolulu Waterfront Master Plan program.

1993 – 2002 Analysis and Need For Modifications

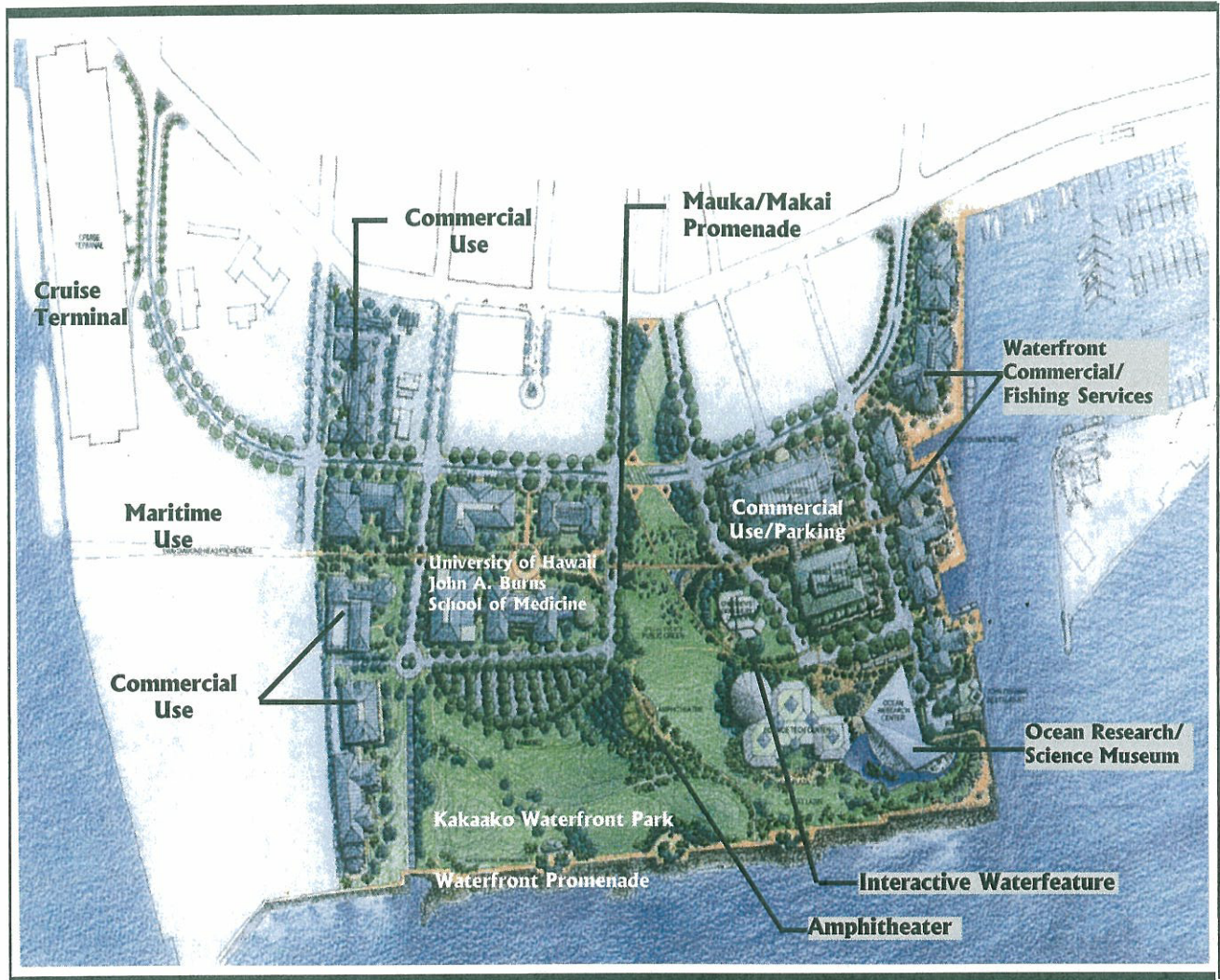
While the 1990 Makai Area Plan incorporated the broad ideas of the Honolulu Waterfront Master Plan and encoded them in zoning for the Makai Area, more in-depth, site-specific analyses on the various features had not yet been conducted. Between 1991 and 1993, HCDA conducted feasibility studies on many of the ideas, such as the inland waterways, revised traffic circulation and proposed cultural facilities. These studies reaffirmed the validity of many ideas, such as the cultural facilities, and led to the elimination of others, such as the inland waterways.

In addition, the potential of the parcels designated for commercial use was carefully examined, as much of the Plan relied on the development of office space on State-owned lands to generate public revenues. Since the late 1980s, the State economy had weakened considerably and the market for standard office space was projected to be weak for at least the next 10 to 15 years. At the same time, it was recognized that the Makai Area presented a unique opportunity to attract new markets to Hawaii, and could potentially assist in the much-needed diversification of the economy. A proactive approach was needed to seek new markets for commercial development in the Makai Area.

In terms of physical development, the idea of the Makai Area as a people-oriented place has endured. Emphasis continues to be on the preservation of the natural environment, and the provision of community facilities such as parks, museums, theaters and promenades (*Figure I-12*).

1.6 Summary of Plan Elements

The overall vision for the Makai Area is to create an active, vibrant area through a variety of new developments, including an expansive waterfront park, maritime uses along the harbor, restaurants, seafood markets and entertainment along Kewalo Basin, a children's museum and a theater for performing arts, a world-class aquarium, educational and research facilities, and commercial developments. In addition, the provision of public open spaces, cultural facilities and amenities will distinguish the Makai Area as a place dedicated to the people of Hawaii.



Not to Scale

Figure I-12
Makai Area
Conceptual Master Plan

November 2002

2.0 LAND USE

2.1 Land Use Principles

The Land Use Plan has been developed to create a balanced and workable community that reflects the development guidance policies enacted by the State Legislature and refined by subsequent analyses. The following are the major principles that have driven the priorities reflected in the Land Use Plan.

Balance Public Amenities with Revenue Generation

The basic land use premise of the Makai Area Plan is that substantial portions of the Makai Area be set aside for public enjoyment and access to the waterfront. The corollary to this principle is that a portion of the State lands be developed for commercial uses, with the revenues derived therefrom used to help support the public parks and other amenities.

Focus on Park Lands as a Centerpiece

The land use pattern in the Makai Area is strongly influenced by the desire for a central corridor of park lands. The purpose of this configuration is to extend the Kakaako Waterfront Park to Ala Moana Boulevard, to enhance its visibility and reinforce its prominence as a major public park. In addition, the park will serve as a centerpiece for the adjacent commercial developments.

Appropriate Use of the Waterfront

The Makai Area is surrounded by water: Honolulu Harbor, Kewalo Basin and Malama Bay. It is obvious that appropriate use of the waterfront is a key to the overall land use pattern. Public access to the waterfront in the Makai Area is a priority of the Land Use Plan, and that is reflected in approximately one-mile of shoreline dedicated to park use. At the same time, the maritime activities which provide vital functions for the community are also a priority.

Land is reserved for maritime uses within the Fort Armstrong area and along Piers 1 and 2, which are premier deep-water berths. It is projected that, in the future, Pier 2 will be needed as an additional cruise boat terminal. However, specific maritime uses and timing will be eventually determined by DOT-Harbors.

Kewalo Basin

Whereas the park lands are dedicated to recreational uses and Fort Armstrong is dedicated to maritime use, Kewalo Basin has been set aside for the public to view and enjoy the working wharf aspect of the waterfront. Planning for Kewalo Basin was conducted by the Hawaii Community Development Authority in consultation with DOT-Harbors and users of the facilities. Both fishing and tourist-related activities will remain at Kewalo Basin, although some relocation will occur in order to avoid conflicts. The Plan includes the eventual relocation of fishing services, such as ice supply, that are now located along the west edge of Kewalo Basin to the south edge of Kewalo Basin and to Honolulu Harbor. In their place, entertainment, restaurants, and retail establishments will be developed along the west edge of Kewalo Basin, and tourism-related boating activities will be accessible from there as well.

A summary of the various land uses is presented in *Table II-1* and illustrated in *Figure II-1*. The maximum allowable building floor areas are presented with each land use zone. The Makai Area will have a total potential floor area of 7.53 million square feet with an overall average floor area ratio (FAR) of .78 for the total land area.

Table II-1
Makai Area Land Use Zones

<u>Land Use Zone</u>	<u>Land Area</u> <u>(acres)</u>	<u>Gross Building</u> <u>Area*</u> <u>(million sf)</u>
Park (P)	46.2	.45
Commercial (C)	49.2	5.05
Mixed Use Zone - Industrial (MUZ-I)	56.1	.70
Waterfront Commercial (WC)	22.3	.95
Aloha Tower Special District	3.4	NA
Public (PU)	10.9	.38
Circulation/Miscellaneous	<u>32.9</u>	<u>NA</u>
TOTAL	221.0	7.53

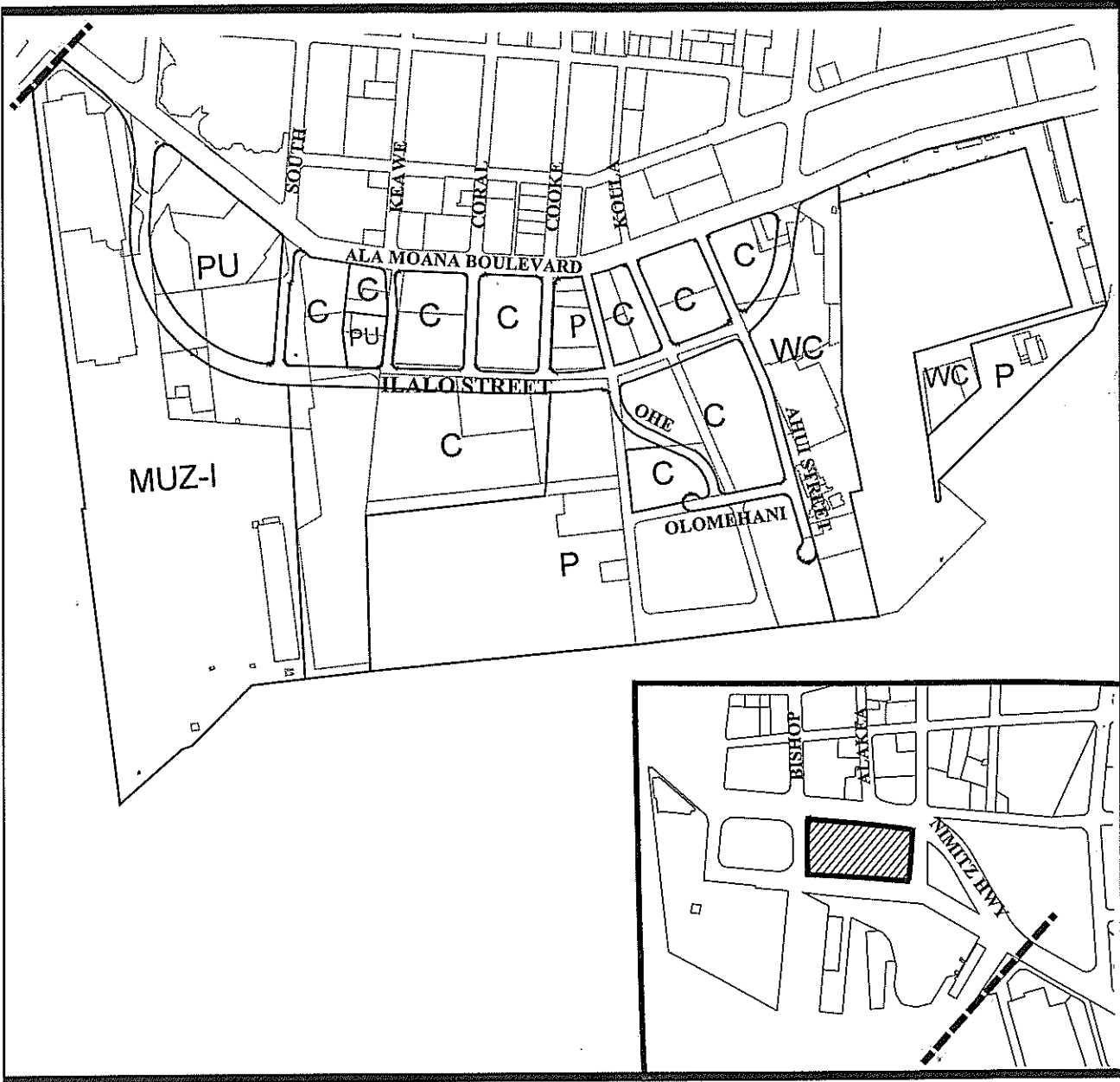
* Land area times maximum allowable FAR.

2.2 Land Use Zones

Park (P)

Generous park lands with direct access to the waterfront remain the centerpiece of the Plan for the Makai Area. Within this zone (P), a variety of park environments will be accommodated. The existing Kakaako Waterfront Park provides a passive park for walking, picnics, and quiet contemplation. Although plans are subject to more detailed feasibility studies and further refinement during design development, at this point, general concepts include the following:

- A world-class aquarium and research facility, which could include uses such as the Kewalo Basin Marine Mammal Laboratory and National Marine Fisheries Service.
- A large urban "green" area for active play and festivals.
- An interactive children's play area with water features and play apparatus.
- An amphitheater adjacent to the urban "green" area and interactive children's play area.
- Extensions of the current promenade around Kewalo Basin and mauka via the mauka/makai promenade.



LEGEND:

- | | |
|-------|-----------------------------|
| C | Commercial |
| MUZ-I | Mixed-Use Zone - Industrial |
| WC | Waterfront Commercial |
| PU | Public |
| P | Park |



Figure II-1
Land Use Zones

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Within the park zone, cultural and educational uses along with a variety of active recreation activities will be allowed and encouraged, to provide additional public resources.

Commercial (C)

The purpose of this zone is to permit a wide range of commercial land uses, such as offices and retail establishments. The "C" zones encompass approximately 50 acres, 12 of which are privately owned. Buildable area varies according to parcel location with floor area ratios (FAR) from 1.5 to 3.5, with a maximum total floor area of 5.05 million square feet.

Mixed Use Zone - Industrial (MUZ-I)

The purpose of this zone is to allow uses, which support the maritime activities and facilities within Honolulu Harbor as well as limited commercial activities. Typical uses include the proposed cruise boat terminals at Piers 1 and 2, and container yard areas within Fort Armstrong. The MUZ-I zone includes 56.1 acres, with a development potential of approximately 700,000 square feet of building area.

Waterfront Commercial (WC)

The purpose of this zone is to allow commercial uses as well as fishing and boating services along the edges of Kewalo Basin. From an urban design as well as a market standpoint, the best use of these waterfront areas is a complex of shops, restaurants, and entertainment, adjacent to existing fishing and maritime operations. Kewalo Basin will retain its working harbor character, while the public will be able to shop, dine and stroll along portions of the waterfront in these areas. The WC zone include 22.30 acres with a development potential of approximately 950,000 square feet of building area.

Public (PU)

The purpose of this zone is to set aside areas for lands with existing public uses that are expected to continue. Specifically, three public areas are designated, including the U. S. Immigration Station, the DOH building, and the Ala Moana Wastewater Pump Station.

Aloha Tower Special District

The Aloha Tower Special District consists of 3.4 acres and is bounded by Ala Moana Boulevard, Bishop Street, Nimitz Highway and Richards Street. The site currently houses the HECO downtown power plant, and is adjacent to Irwin Park, the Downtown Financial District and the Aloha Tower development area. HCDA designation of the site as a Special District is based on the recognition that the area is not only distinct from other lands in the Kakaako District, but also has strong and direct association with the downtown waterfront. The Makai Area Rules established for the area are purposefully broad, recognizing the need for new development to be compatible with the surrounding area.

2.3 Historic Resources

In establishing the Hawaii Community Development Authority and the Kakaako Community Development District, the State Legislature articulated that "historic sites and culturally significant facilities, settings or locations shall be preserved." The preservation of such resources is, therefore, an integral part of the Makai Area Plan.

Significant historic resources in the Makai Area include the U. S. Immigration Station, the DOH building and the former Ala Moana Sewage Pump Station. The U. S. Immigration Station and the DOH building are listed on the National Register of Historic Places and the former Ala Moana Sewage Pump Station is listed on both the State and National Registers. Placement on the State and/or National Historic Registers does not assure preservation; however, since the U. S. Immigration Station and the DOH building are government-owned and are currently functioning for public use, continued preservation of these sites can be reasonably expected.

The function of the former Ala Moana Sewage Pump Station has been assumed by the City and County of Honolulu Ala Moana Wastewater Pump Station located adjacent to the historic structure. The proposed use of the historic structure is for a commercial development. To ensure that the historic structure be preserved, any new development will be required to integrate the historic and architectural significance of the existing buildings with any new structures (*Figure II-2*).

Based on findings from HCDA's inventory of Kakaako's significant historic and cultural resources, there are no other significant cultural resources in the Makai Area.

3.0 TRANSPORTATION SYSTEMS

The Makai Area Plan includes provisions for different modes of transportation designed to move people and goods safely and efficiently, and to service the demands of the proposed land use activities. The transportation system includes improvements for cars and public transportation, bicycles and pedestrians. In general there is an emphasis on pedestrian movement through the area, in keeping with the waterfront as a people-oriented place.

3.1 Roads

Roadway improvements include upgrading existing roads and constructing new roads to meet or exceed City and County standards. Proposed vehicular circulation is illustrated in

Figure III-1, and roadway dimensions are presented in *Table III-1*. The identified rights-of-way have been analyzed and determined to be sufficient to accommodate anticipated traffic generated by the ultimate development of the Makai Area.

Ilalo Street

Ilalo Street is proposed as the principal collector street for the Makai Area. Two extensions are required to connect with Ilalo Street to create a through street. The west extension begins

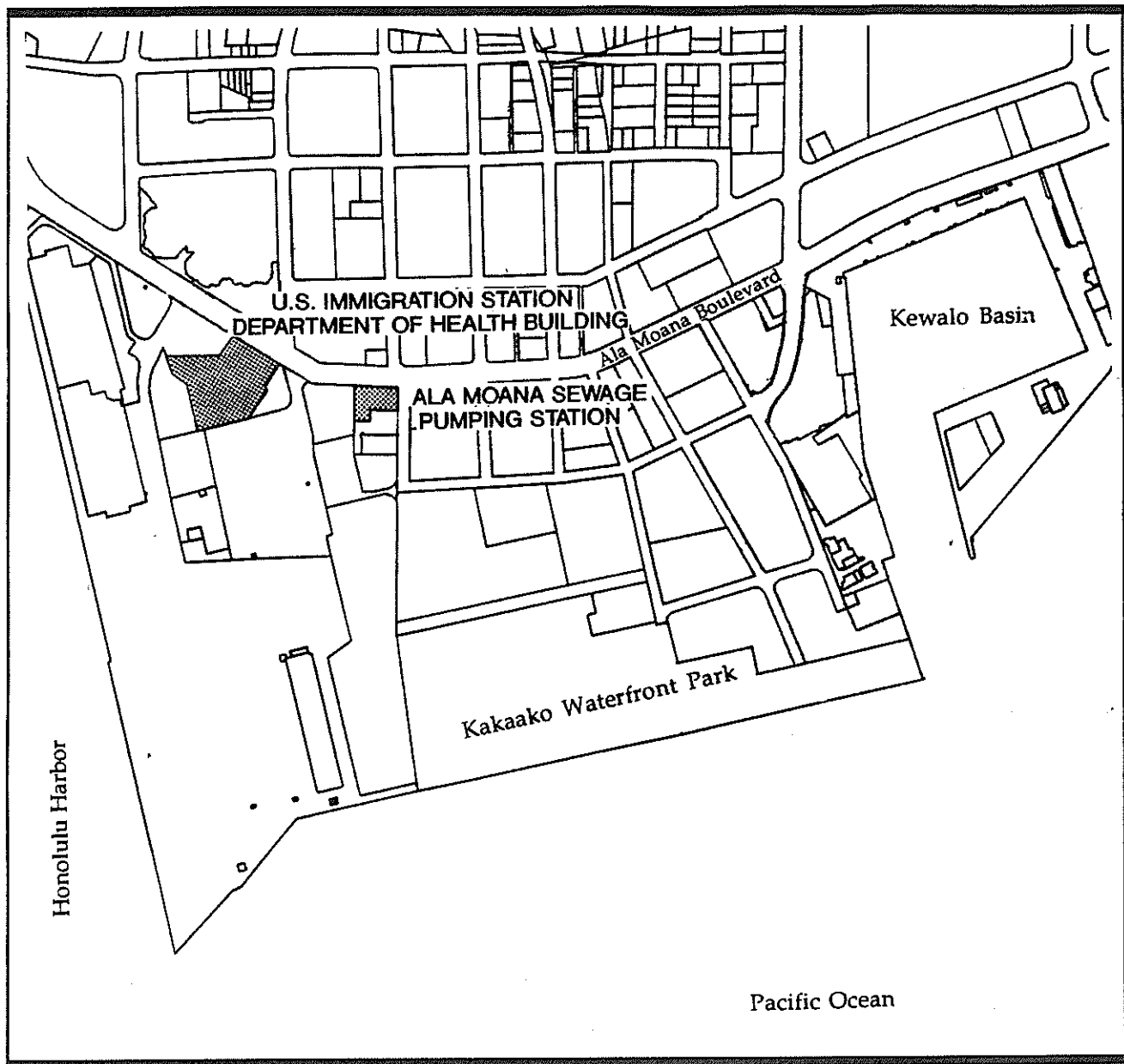
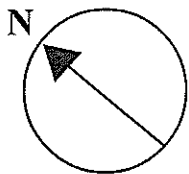


Figure II-2
Historic Resources

Feet
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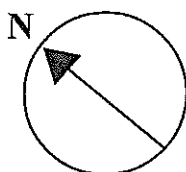
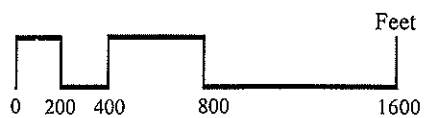
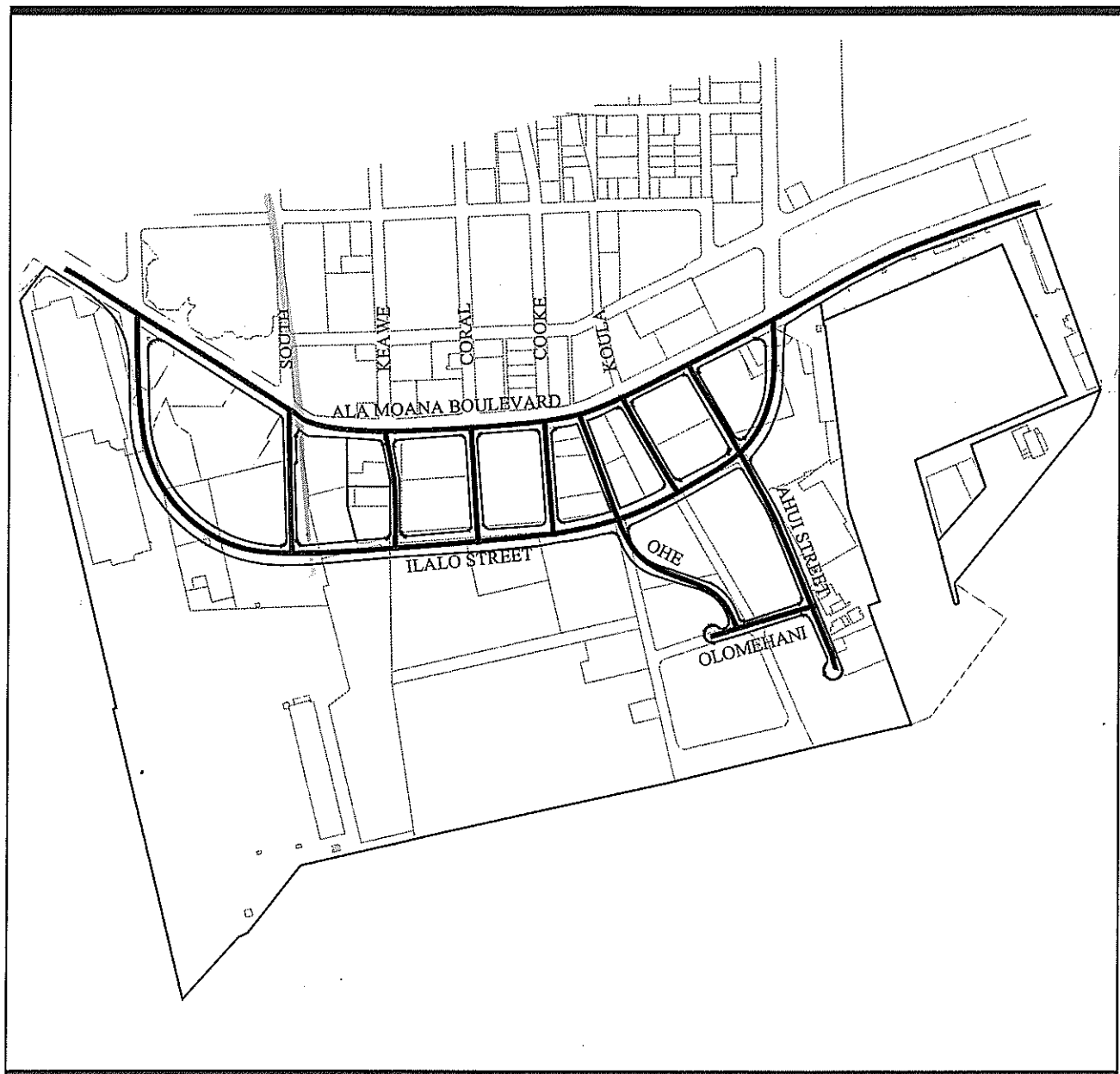


Figure III-1
Vehicular Circulation

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at the present Punchbowl Street-Ala Moana Boulevard intersection, and connects to the existing Keawe Street-Ilalo Street intersection. The right-of-way will continue along Ilalo Street and connect to the east extension at Ahui Street. The east extension will run through the existing State Office Building parking lot curving up to connect at the Ward Avenue-Ala Moana Boulevard intersection.

Ala Moana Boulevard

Ala Moana Boulevard provides the primary regional access to Kakaako. Currently, there are seven lanes of traffic, including six through lanes and a central left turn lane. The State Department of Transportation (DOT) has identified Ala Moana Boulevard as a major component of its proposed "Honolulu Makai Bikeway", which will ultimately involve the development of bike lanes along the roadway. Other proposed improvements include minor realignments and intersection improvements to provide for additional turning lanes. These improvements are expected to occur in conjunction with adjacent redevelopment activities.

**Table III-1
Roadway Dimensions**

<u>Street</u>	<u>Traffic Lanes</u>	<u>Minimum Curb-Curb* (feet)</u>	<u>Minimum R-O-W (feet)</u>
Ala Moana Boulevard	6		100
Ilalo Street	5	54-59	94
Olomehani Street	2	24	50
South Street	2	24	50
Keawe Street	2	24	50
Coral Street	2	24	50
Cooke Street	2	44	66
Koula Street (between Ala Moana Boulevard and Ilalo Street)	2	24	50
Ohe Street	2	24	50
Olomehani Street	2	24	50
Ahui Street	2	24	50

* Except at intersections which shall be designed with adequate turning lanes.

Side Streets (Ahui, Koula, Coral, Cooke, Keawe, Ohe, Olomehani and South Streets)

Ahui, Coral, Cooke, Koula, Ohe, Olomehani and Keawe Streets will remain open for traffic use, and South Street will be extended makai along its present alignment. These streets will provide one through-lane in each direction and where appropriate, curb parking.

3.2 Parking

Parking demand projections in the Makai Area are based on office use, as well as use of the parks and retail commercial projects. The parking demand will be accommodated by a combination of on-street, surface lot, and off-street parking facilities. The off-street parking will be developed in conjunction with each project, and is estimated to include 10,800 spaces

after all phases are completed. This parking will serve each project, with portions accessible to the general public. Parking requirements are established in the Makai Area Rules. Whereas there are standard formulas for the required number of parking spaces for commercial use, parking demand for park use is difficult to determine. Currently, the Kakaako Waterfront Park has 300 spaces, which is ample. It is anticipated, however, that the development of the cultural facilities within the park will increase parking demand. This increased demand is expected to be met by surface parking lots in the park, off-street parking facilities and on-street parking along Makai Area streets. Together these locations are anticipated to provide a total of 1,000 spaces.

3.3 Public Transportation

Public transportation will be provided primarily by the City bus system (TheBus) (*Figure III-2*). At present TheBus serves the general area with routes along Ala Moana Boulevard, Ward Avenue and Punchbowl Street. The new development within the Makai Area could add approximately 2,200 passenger boardings and alightings to the routes serving this area. TheBus routes along Ala Moana Boulevard may be able to accommodate such increased level without adding capacity specifically for this area, as there currently is ample, unused capacity along the Kakaako segment. In the future, there may be a need for a new route along Ilalo Street. For new routes, shelters and benches will be required at all bus stops.

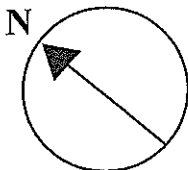
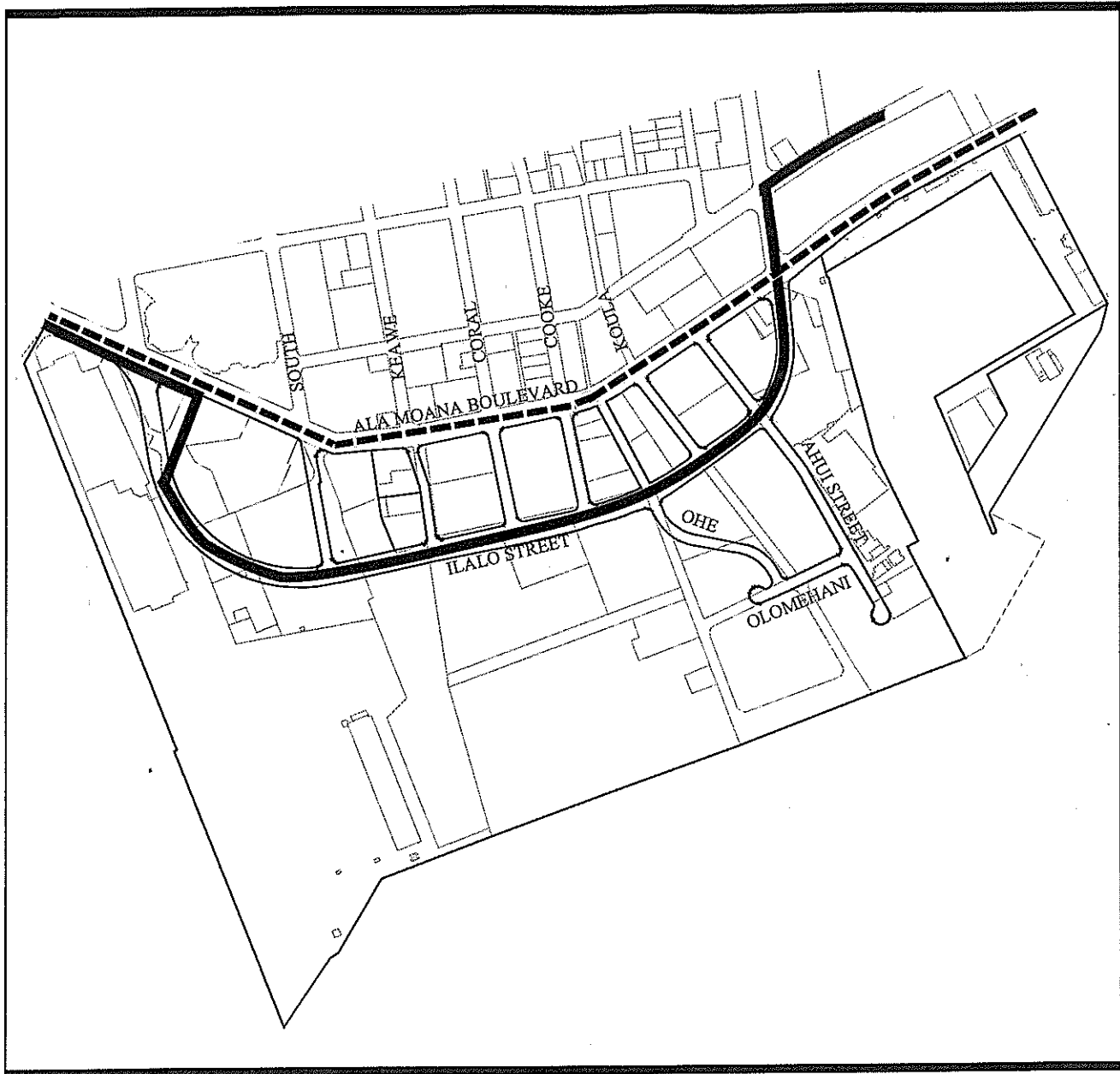
A bus rapid transit has been proposed for Honolulu. City plans for alternate alignments through Kakaako include an alignment servicing the Mauka Area as well as a Makai Area alignment along Ilalo Street.

In addition to TheBus and the proposed bus rapid transit system, long-range plans for public transportation include the potential provision of a shuttle service that would connect the Makai Area with the Kakaako Mauka Area, downtown Honolulu and Aloha Tower.

3.4 Bikeways

An important objective of the Plan is to increase non-vehicular access to the Makai Area from Downtown, Ala Moana Park and the Mauka Area. The planned bicycle system within the Makai Area was designed in conjunction with the "Guide for the Development of Bicycle Facilities" (American Association of State Highway and Transportation Officials, August 1991), "Bike Plan Hawaii" (DOT) and bikeway standards established by the City and County Department of Transportation Services.

The bicycle facilities are based on DOT's hierarchical system with: "bike lanes" as striped lanes for the exclusive use of bicycles; "bike routes" as widened roadways which are shared by bicycles and automobiles; and "bike paths" which are separate paths for the use of bicycles. Plans include a facility that will transport bicyclists in the mauka-makai direction



LEGEND:



Bus System
Route



City and County of Honolulu's
Bus Rapid Transit Route

Figure III-2
Public Transportation Plan

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along Keawe and Cooke Streets to the Kakaako Waterfront Park. In the east-west direction, the bikeway will traverse along the waterfront promenade at Kakaako Waterfront Park and Kewalo Basin. The bikeway will connect to Ala Moana Park at the east end of Kewalo Basin. DOT has planned a regional bikeway network that designates a bike lane along Ala Moana Boulevard (*Figure III-3*).

To encourage use of bicycles, bicycle racks, bicycle storage areas, and other bike accessories shall be provided within development projects. These facilities will be located in accessible areas which are well-lit and secure.

3.5 Pedestrianways

An outstanding pedestrian environment throughout the Makai Area is a major objective of the Plan and provisions include several different types of pedestrianways. Pedestrian promenades are the most prominent features and include the waterfront promenade and the mauka-makai promenade along Cooke Street (*Figure III-4*). Also important is Ilalo Street, which is envisioned as a strolling and shopping street.

Waterfront Promenade

The waterfront promenade began with a small segment along the ocean at Kewalo Basin and now includes a 1/4-mile stretch along the water at Kakaako Waterfront Park. This pedestrianway offers splendid views to the ocean, Diamond Head Crater, Waikiki, and the Ewa coast of the island. The waterfront promenade also provides for a variety of activities such as roller-blading, picnics and fishing.

Mauka-Makai Promenade

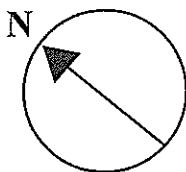
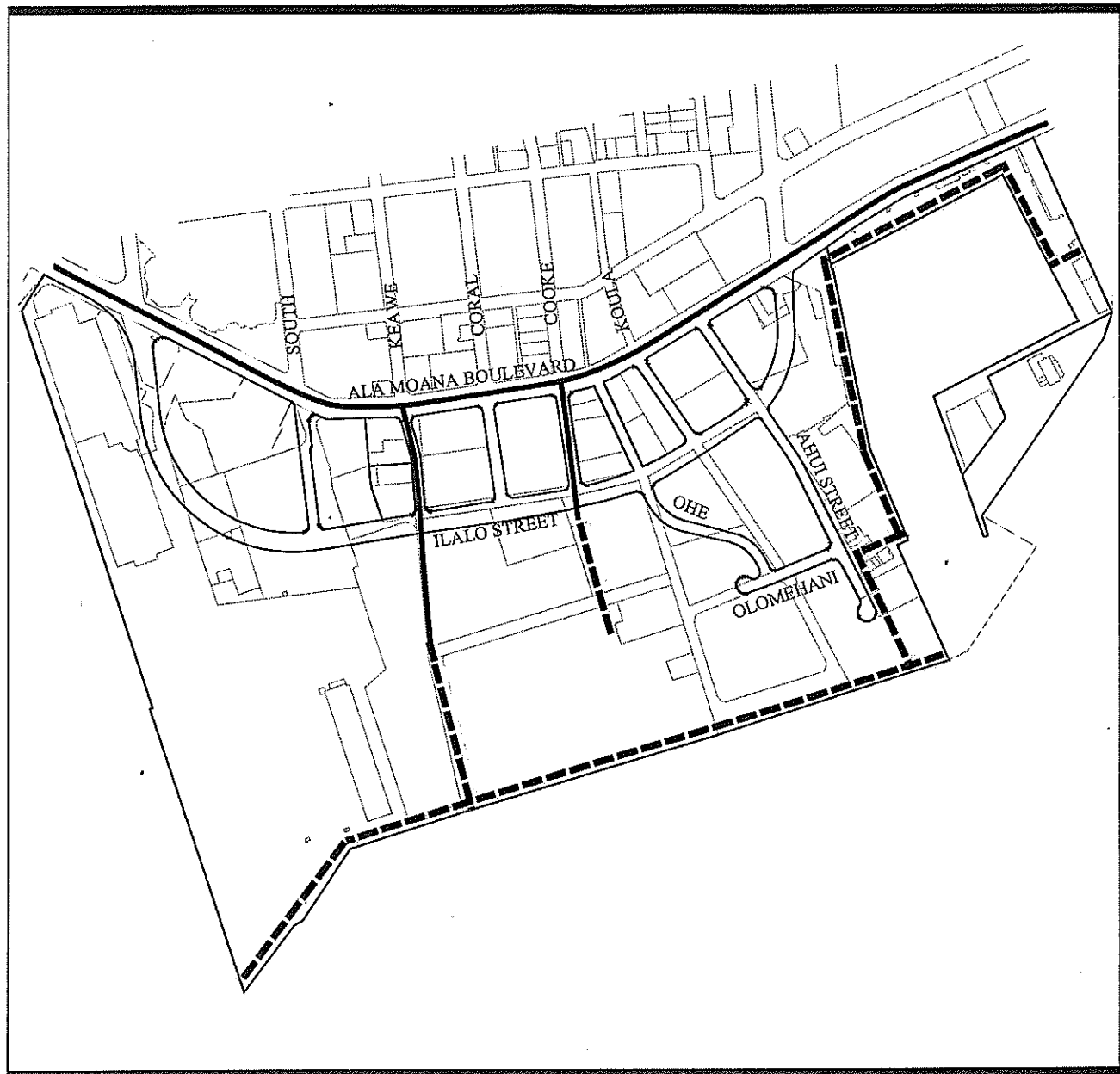
Originally envisioned as a small extension of park across Ala Moana Boulevard, the mauka-makai promenade strengthens the original concept with a landscaped pedestrianway that links the Kakaako Waterfront Park with Mother Waldron Playground. With the support of adjacent landowners, this urban design element will form a linear spine, promoting the reintegration of the City and waterfront. The promenade will be created by increasing the building setback requirement on the Ewa side of Cooke Street, with a commensurate building setback reduction on the Diamond Head side of Coral Street.

Ilalo Street

The Ilalo Street pedestrianway runs in the Ewa-Diamond Head direction, and is designed to be a major strolling and shopping street. Defined by harbors at both ends, the pedestrian environment is envisioned to be outstanding, with closely spaced, large shade trees, generous sidewalks and carefully designed street furnishings. Retail areas on the ground level will provide visual interest as well as merchandise, and will form a consistent edge in the manner of outstanding retail streets in many other urban areas.

Side Street Environments

In contrast to the wide street and sidewalks along Ilalo Street, the side streets and sidewalks will be narrow in width. Street trees will provide shade for pedestrians and adjacent yard



LEGEND:



-  Bike Lane
-  Bike Path

Figure III-3
Bicycle Facilities Plan

November 2002

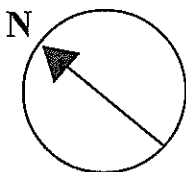
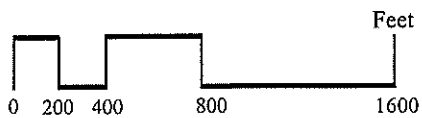
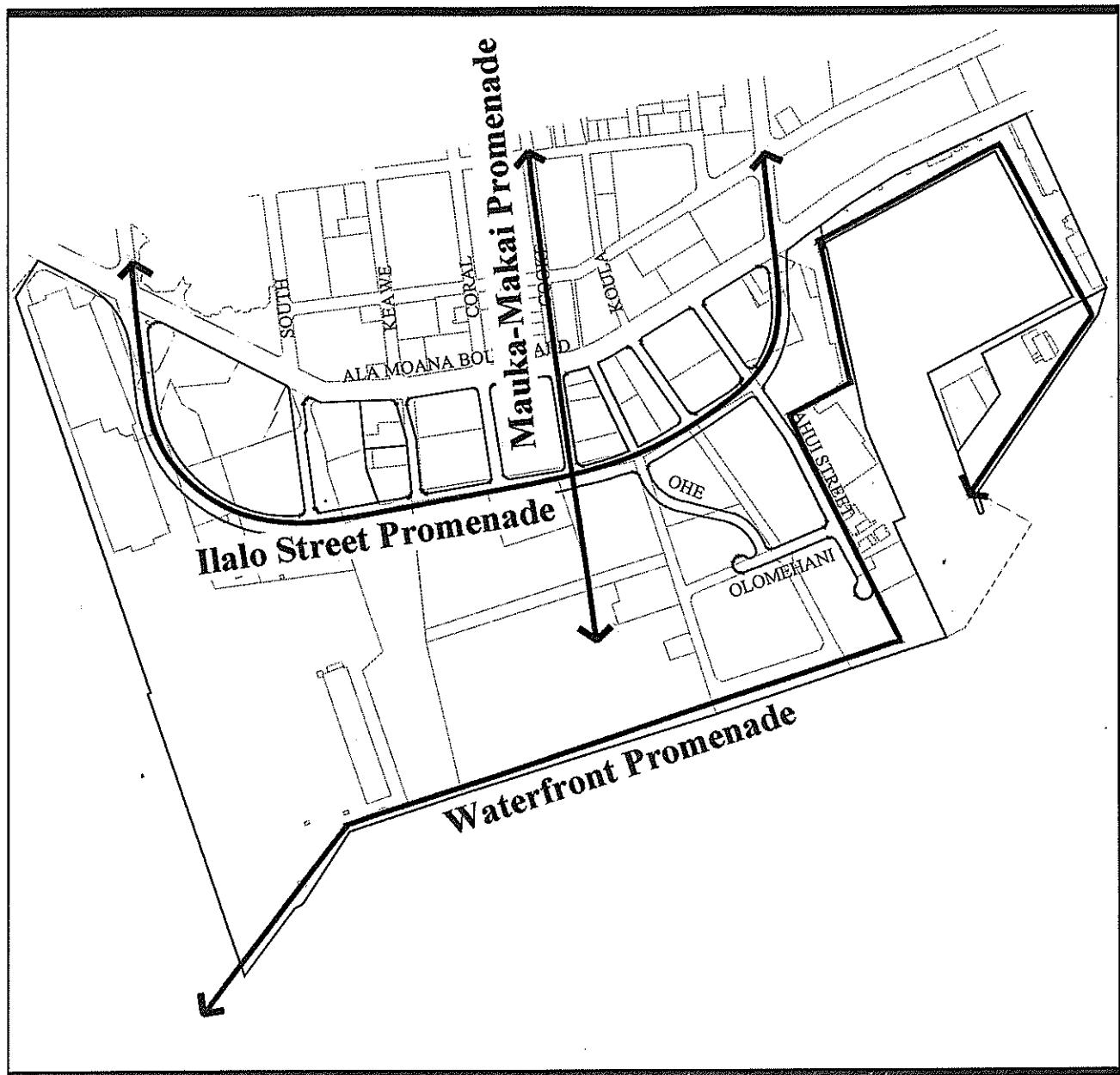


Figure III-4
Pedestrianways Plan

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plantings, along with street lights and furnishings, will ensure that these streets are attractive pedestrianways.

3.6 Land Acquisitions

In order to implement the Plan, the acquisition of limited amounts of additional land within the Makai Area is expected. Ilalo Street will require significant widening but the expansion will require minimal land acquisition from adjacent landowner Kamehameha Schools. With the exception of Ala Moana Boulevard, all improved roads are expected to be owned and maintained by the City and County of Honolulu.

HCDA has already acquired the parcel of land bounded by Ala Moana Boulevard, Ohe, Ilalo and Cooke Streets, as was stipulated in the 1990 Makai Area Plan, for its inclusion as park land. The final parcel remaining for acquisition includes a portion of the Federal property behind the U. S. Immigration Station. This area is necessary to complete the Ilalo Street roadway alignment.

4.0 URBAN DESIGN

4.1 Urban Design and the Makai Area

Contemporary cities have developed in response to the objectives of two primary forces: private development interests seeking the creation of unique and financially successful projects; and government, seeking the creation of a beneficial public domain and a logical, coherent city. Individual developers exercise control over building style, form and materials, while government regulates height, density and other broad parameters.

In many cities over the last 40 years, development has not resulted in outstanding urban environments. More recently, both public and private interests have been trying to rediscover the art of building cities that produced numerous outstanding examples before 1950, including parts of Honolulu. A number of new strategies have been developed that utilize both traditional planning methods as well as concepts tailored to contemporary lifestyles.

Most of the Makai Area is publicly owned, and is therefore a unique opportunity to create an outstanding urban environment and serve as an example of excellence. With an emphasis on the pedestrian environment, block after block can be linked with comfortable, shady walks connecting buildings that are attractive and relate to the land.

Development of these lands represents a tremendous social and economic opportunity. Recognizing that inappropriate development could seriously compromise this opportunity, the Makai Area Plan balances public and private interests by carefully prescribing ground level requirements while encouraging a variety of building forms, land uses, and architectural styles.

4.2 Urban Design Principles and Elements

4.2.1 Principles

The following urban design principles and elements are intended to strengthen the overall concept of the Makai Area Plan. Each principle and element will function together to form a physical environment that is suitable to work and play.

Strong Linkage of the Kakaako Waterfront Park to the City

A generous waterfront park is the centerpiece of the Makai Area Plan. Constructed in 1992, the Kakaako Waterfront Park assists in the recapture of the Honolulu waterfront for public use, and provides a key link in a continuous system of parks extending from Waikiki to the airport. In addition, the park is a unifying urban design element that extends up through the Kakaako Peninsula and across Ala Moana Boulevard, creating a strong physical and visual link to the urban fabric of Honolulu.

Flexibility of Building Form

Within certain basic parameters, such as height and view corridors, building form and architectural style should be flexible. Allowing for a variety of forms sets the stage for both creativity and easy accommodation of a variety of uses. Ultimately the view of the skyline as well as the view from a pedestrian's perspective benefit from a variety of forms.

Outstanding Pedestrian Environment

The pedestrian environment, sometimes considered last, should be of primary concern. Clear, unimpeded sidewalks with consistent street trees closely spaced for shade, as well as a lack of randomly located driveways, are all critical to a pedestrian-friendly environment. Carefully considered site furnishings, such as benches and light poles, along with public art on the street, sends the message that the pedestrian is important.

4.2.2 Site-Specific Elements

Variety of Park Environments

Additions to the existing Kakaako Waterfront Park will add a variety of spaces for public enjoyment. In addition to the areas for walking, fishing and picnicking currently available, new park land will provide a variety of park environments including:

- The existing passive park for walking, biking, picnicking, and quiet contemplation.
- A large urban "green" for active play and festivals.

- A children's play area with interactive activities such as a water feature and play apparatus.
- An amphitheater adjacent to the urban "green" and children's play area.
- Extensions of the existing waterfront promenades to form a continuous route through the Kakaako Peninsula.

Kewalo Commercial

The Kewalo Waterfront area, which includes both sides of Ahui Street, is envisioned to be an active waterfront commercial area with a promenade along the harbor edge as well as plazas where people can congregate and enjoy the ocean view.

Active Ground Floor Uses

While all the streets in the Makai Area should comfortably accommodate both autos and pedestrians, certain streets will have a distinctly active, pedestrian-oriented character. Ilalo Street will be the premier strolling and shopping street with active ground floor uses along both sides of the street. The street will have a curb-to-curb width of no more than 59 feet to encourage pedestrian crossings, and will include wide sidewalks, a shady canopy of trees and curb-side parking.

Ground floor frontages along the mauka-makai promenade will be encouraged to be active and relate positively to the public realm with a broad range of uses such as banks, lobbies, and exhibits, as well as shops and restaurants.

View Corridors

The Makai Area will preserve important views of Ala Moana Park, Diamond Head, and the mauka/makai corridor along Cooke Street. In addition, the existing view corridor down Ala Moana Boulevard will be maintained.

Cultural and Educational Facilities

Cultural and educational facilities have always been a fundamental element in HCDA's evolving community development plans and objectives.

Projects completed or anticipated include the Children's Discovery Center, the University of Hawaii John A. Burns School of Medicine, a performing arts center, and world-class aquarium and research facility. These facilities will be integrated into the urban fabric, much as cultural events are perceived as an integral part of city life.

Public Art

The placement of public art in the Makai Area is intended to reinforce the concept of the continuous public realm. Instead of more typical monumental art programs that place large works at key intersections and squares, public art here will strive to

support numerous smaller pieces integrated with the landscape in all types of open spaces.

4.3 Building Envelope Definition

4.3.1 Development Provisions

All development proposals are required to obtain a development permit. Procedures for development permits are outlined in the Makai Area Rules.

A typical vertical mix within a development on Commercial zone lands would be retail and other commercial uses on the lower floors, with office uses within the towers. Towers would be spaced to provide sufficient light and air between them and to minimize the obstruction of views from within and outside the Kakaako District. Parking will be located within the interior sections of development parcels; curb-side parking along streets and surface parking adjacent to parks will also be provided, where appropriate.

4.3.2 Density and Building Height

The urban form in the Makai Area will be diverse, with a mix structures rising to levels of 200 feet in the Commercial zone, and stepping down to 65 feet near the Capital District and 45 feet along the waterfront (*Figure IV-1*).

Gradually decreasing building heights are associated with densities from a higher intensity zone fronting Ala Moana Boulevard to the lower intensity parcels fronting the Waterfront Park.

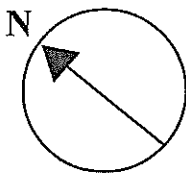
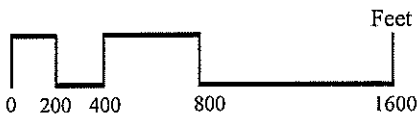
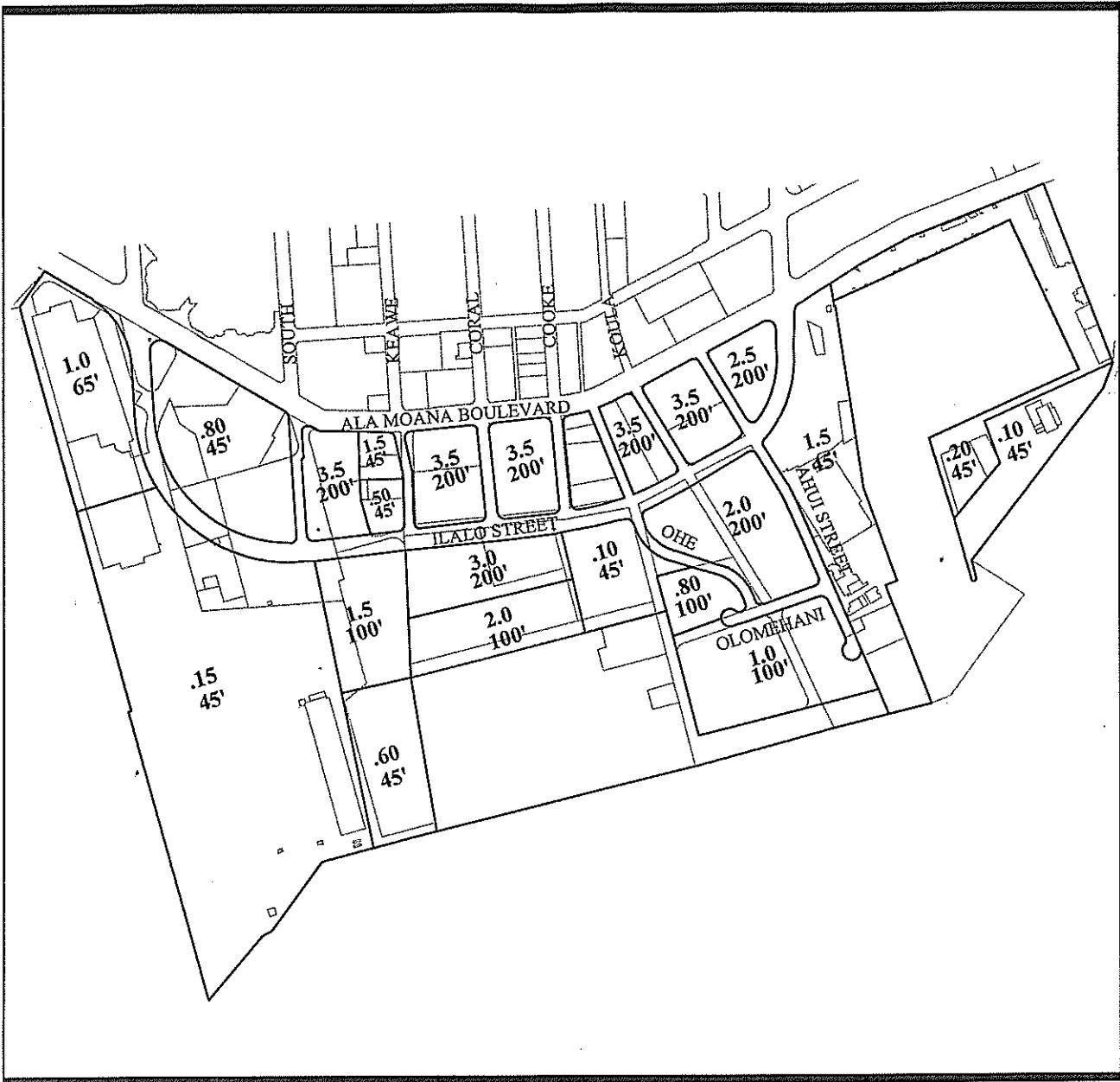
4.3.3 Building Form

The Makai Area presents the opportunity to display a variety of building forms. The platform level extends to a maximum of 65 feet and can be lower. Towers along Ala Moana Boulevard must be stepped back 75 feet from the property line (*Figure IV-2*). In general, towers are encouraged to be oriented with the long axis in the mauka-makai direction, with a maximum dimension of 110 feet permitted in the Ewa-Diamond Head direction.

In general, buildings will be required to be set back 15 feet from the property line and the setback area must be landscaped. If ground floor windows facing the street are provided, however, the setback may be reduced to 5 feet and paved. This provision will encourage active ground floor uses instead of blank walls along the streets. The maximum building envelope is indicated in *Figure IV-2*.

4.3.4 Number and Location of Tall Buildings

One tower will be permitted for each development project on a lot of 80,000 square feet or less. For lots greater than 80,000 square feet, two towers may be allowed and the spacing between towers is predicated upon distances to neighboring towers. In

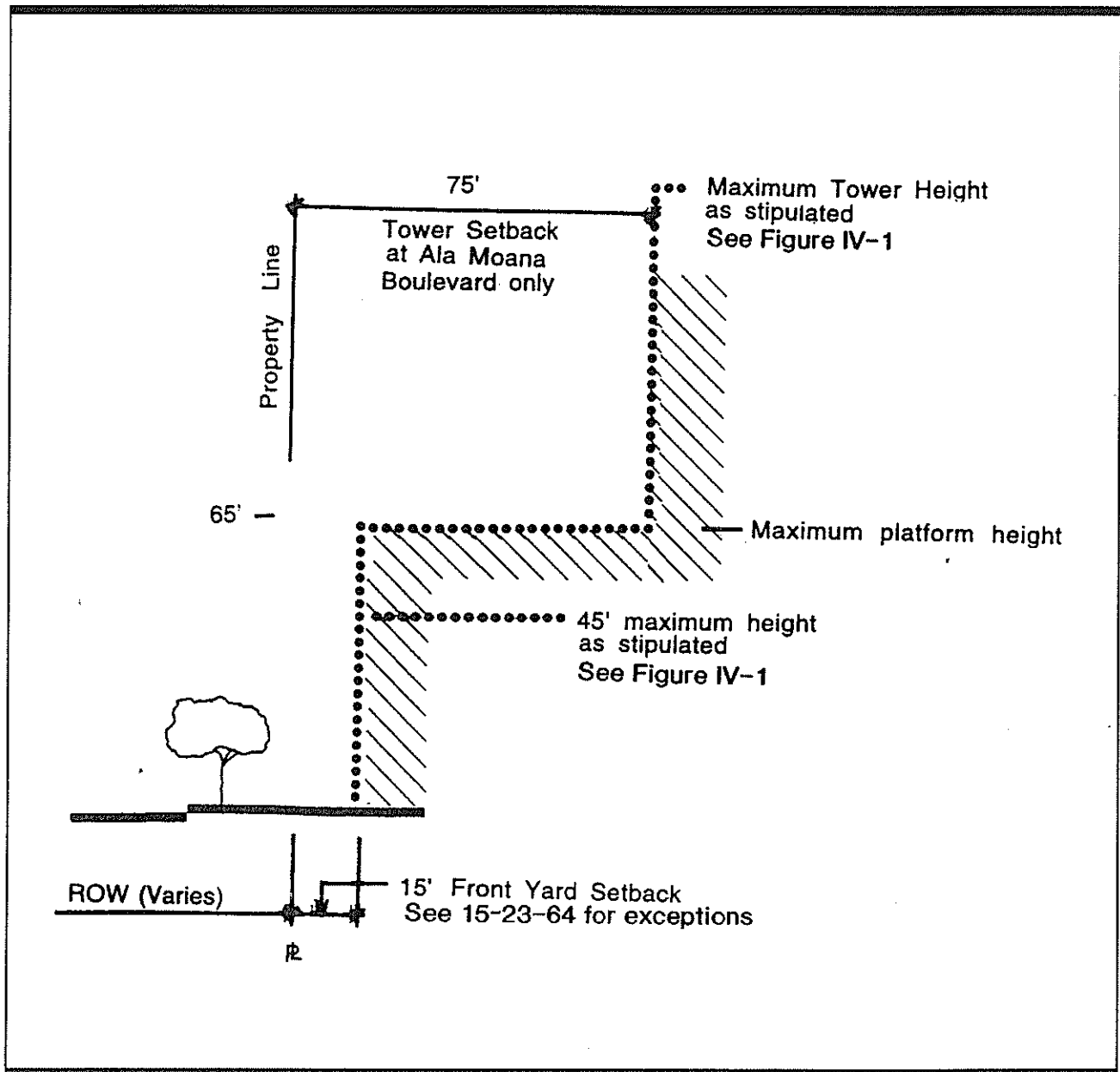


LEGEND:

- 200'** Indicates Maximum Allowable Height
- 3.5** Indicates Maximum FAR

Figure IV-1
Maximum Height and Density Plan

November 2002



Not to Scale

Figure IV-2
Maximum Building Envelope

November 2002

general, towers should be at least 200 feet between the long side of the towers and at least 150 feet between the short side of the towers. Final tower location will be determined by the developer in consultation with HCDA.

4.4 Pedestrian Environment

As stated previously, the Makai Area Plan places high priority on the creation of an outstanding pedestrian environment. The provision of public parks, as well as active ground floor uses along key frontages, will support this goal. Similarly, appropriate design of public sidewalks and privately owned open space is also critical to the establishment of an outstanding pedestrian system.

4.4.1 Streets and Sidewalks

Ilalo Street will become a premier shopping street linking the Makai Area in the Ewa-Diamond Head direction. The sidewalks and planting strips will be broad, up to 20 feet, with generous planting and seating areas. Monkeypod trees will line both sides of Ilalo Street. Curb cuts, driveways, or service areas will be limited to maintain continuity of the sidewalks. Side streets will have narrower sidewalks, 10 feet wide, with street trees planted in tree wells at the curb.

4.4.2 Open Space

In addition to public parks, each development within the Makai Area is required to provide at-grade open space in the amount of 20% of the property area. In order to be a successful component of the pedestrian environment, it is important that such open space be safe, attractive, and useful. Arcades are also viewed as a complement to open space. Special incentives are provided in the Makai Area Rules to substitute arcades for required open space.

Open space that is merely the result of an increased setback or an amorphously shaped field is not desirable. In order to feel safe, open space must have clear edges and boundaries, preferably lined with active ground floor uses. Incentives will also be provided in the Makai Area Rules to achieve well-proportioned open space.

5.0 INFRASTRUCTURE SYSTEMS

As mandated by the Legislature, HCDA is to act as a catalyst for development and its purpose is to "join the strengths of private enterprise, and public development and regulation into a new form capable of long-range planning and implementation of improved community development." Infrastructure improvements by HCDA are a major tool to strengthen the development efforts of the public and private sectors, and provide the basic services needed for the growth and functioning of a community.

For the most part, the existing infrastructure in the Makai Area is inadequate to support any sizable development and, before new developments can occur, it must be improved. All existing infrastructure systems in the Makai Area are proposed to be upgraded to meet the maximum

potential demands and will be coordinated with the broader region, including the Mauka Area. Prior to the initiation of any new development, the utilities expected to serve it will have adequate capacities to meet the needs and demands to be generated. All utilities will be designed in accordance with appropriate City and County and utility company standards and established engineering principles. Infrastructure plans are presented as concepts in order to understand the magnitude of costs needed. Final design will be based on subsequent detailed engineering analyses.

Major infrastructure improvement costs for future roads and sidewalks, water, wastewater, drainage, electrical and communication systems, street lights and traffic signalization in the Makai Area (as summarized in Table V-1 below and described further in the following text and layouts) are estimated to be about \$40.00 million in 2002 dollars. Estimated costs include allocations for planning, design and contingencies.

Table V-1
Infrastructure Improvement Costs

<u>Infrastructure System</u>	<u>Estimated Cost</u> <u>(\$ millions)</u>
Roads	13.65
Water Supply	2.10
Wastewater	4.50
Drainage	2.60
Power, Communications, Street Lighting and Traffic Controls	11.95
Design Fees	<u>5.20</u>
TOTAL	40.00

Roadways, water, wastewater, drainage, street lighting and traffic signalization systems are generally maintained and operated by public agencies while power and communication systems are maintained and operated by privately-run public utility companies.

5.1 Roadways

The estimated costs for Makai Area roadway right-of-way improvements is \$13.65 million. The estimated roadway costs include roadway excavation, base course, pavement curbs, sidewalk signs and striping, necessary intersection improvements, and major landscaping elements. (See Chapter 3 for roadway layout and dimensions.)

5.2 Water Supply System

To meet water demands expected from proposed land use activities, the water system will be upgraded in accordance with the standards of the City Board of Water Supply. The existing and proposed waterline improvements for the Makai Area are shown in *Figure V-1*. Approximately 4,560 feet of new and larger water lines will be needed to meet expected business water usage as well as fire flow requirements. Local improvements will

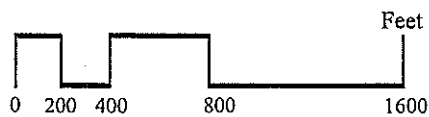
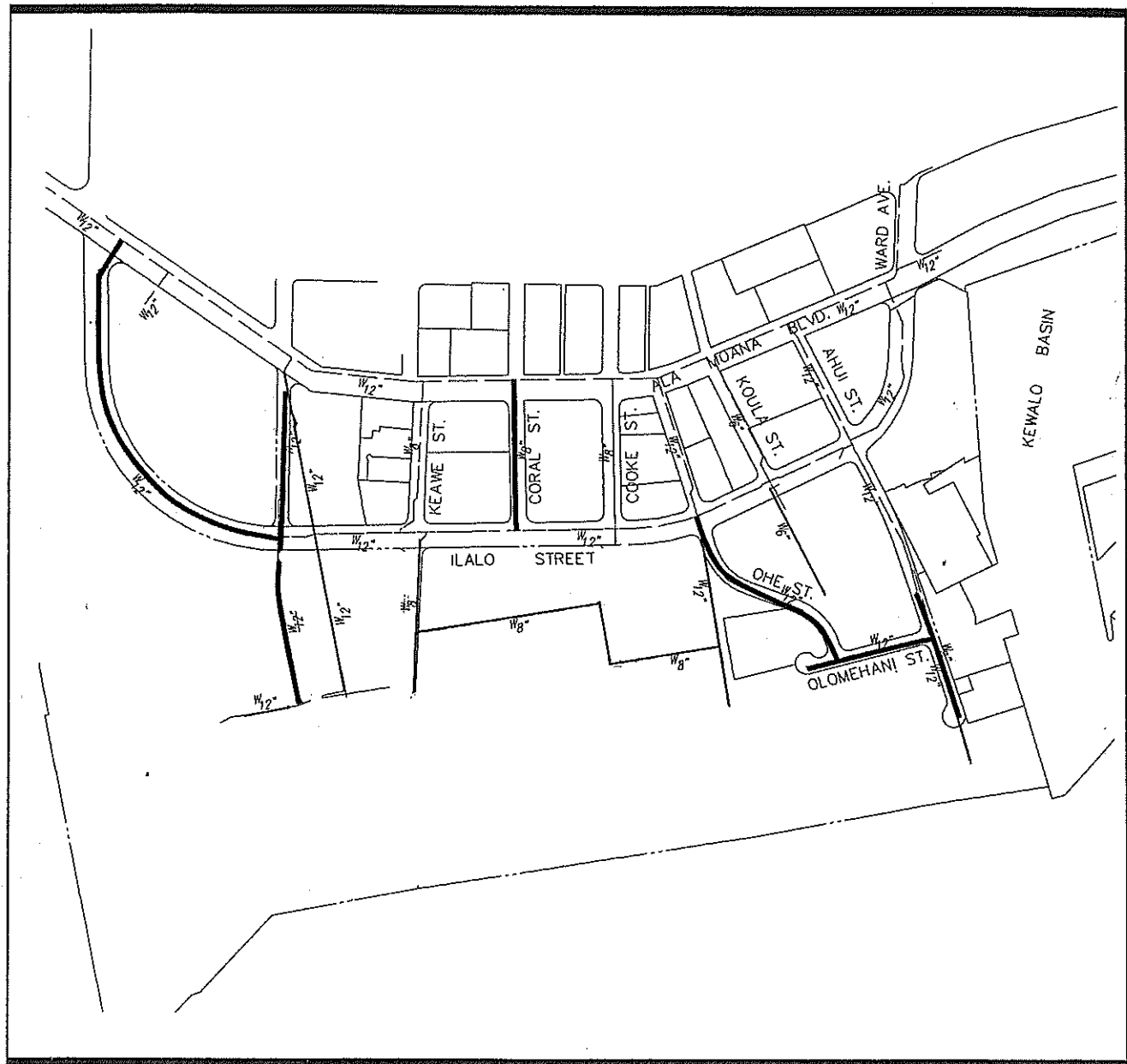


Figure V-1
Proposed Waterlines



LEGEND:

- Existing Waterlines
- Waterlines to be Abandoned
- Proposed Waterlines

November 2002

include the installation of 8- and 12-inch water lines in major and local streets, along with new fire hydrants, water valves, manholes, and other appurtenances. In addition, HCDA will explore the potential for alternative water systems, such as a non-potable source for irrigation purposes, thereby reducing water requirements.

The total cost for the Makai Area water system improvements for local water lines is estimated to be \$2.10 million.

5.3 Wastewater System

The proposed wastewater system improvements for the Makai Area are shown in *Figure V-2*. The system consists of a series of 8-inch, 12-inch, 15-inch, and 18-inch gravity lines and modifications to existing 48-inch and 78-inch force mains. Existing wastewater lines not needing improvement are also shown. Approximately 4,520 feet of new wastewater lines will be needed. Other improvements include the replacement of existing lines with larger lines to accommodate projected flows and meet City and County standards.

The total cost for local wastewater system improvements in the Makai Area is estimated to be \$4.50 million.

5.4 Drainage System

The proposed drainage system improvements for the Makai Area include new reinforced concrete pipe and box culverts, manholes, catch basins and/or drainage inlets at appropriate points of the system. Proposed local and major drainage lines are shown in *Figure V-3*. Approximately 4,000 feet of new pipe ranging in sizes from 24-inch up to 108-inch drain lines will be needed. Existing drain lines not needing improvement are also shown.

The total cost for drainage system improvements is estimated to be \$2.60 million.





5.5 Power, Communications, Street Lighting and Traffic Signal Systems

Gas

A gas line layout is not proposed because a system is dependent upon the potential load, number of customers, cost of installation, and other factors. Gasco, Inc. is responsible for the funding and replacement of undersized or deteriorated lines as necessary. In the future, Gasco, Inc. will decide whether to construct service mains to new customers or provide them with containerized gas.

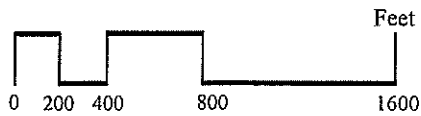
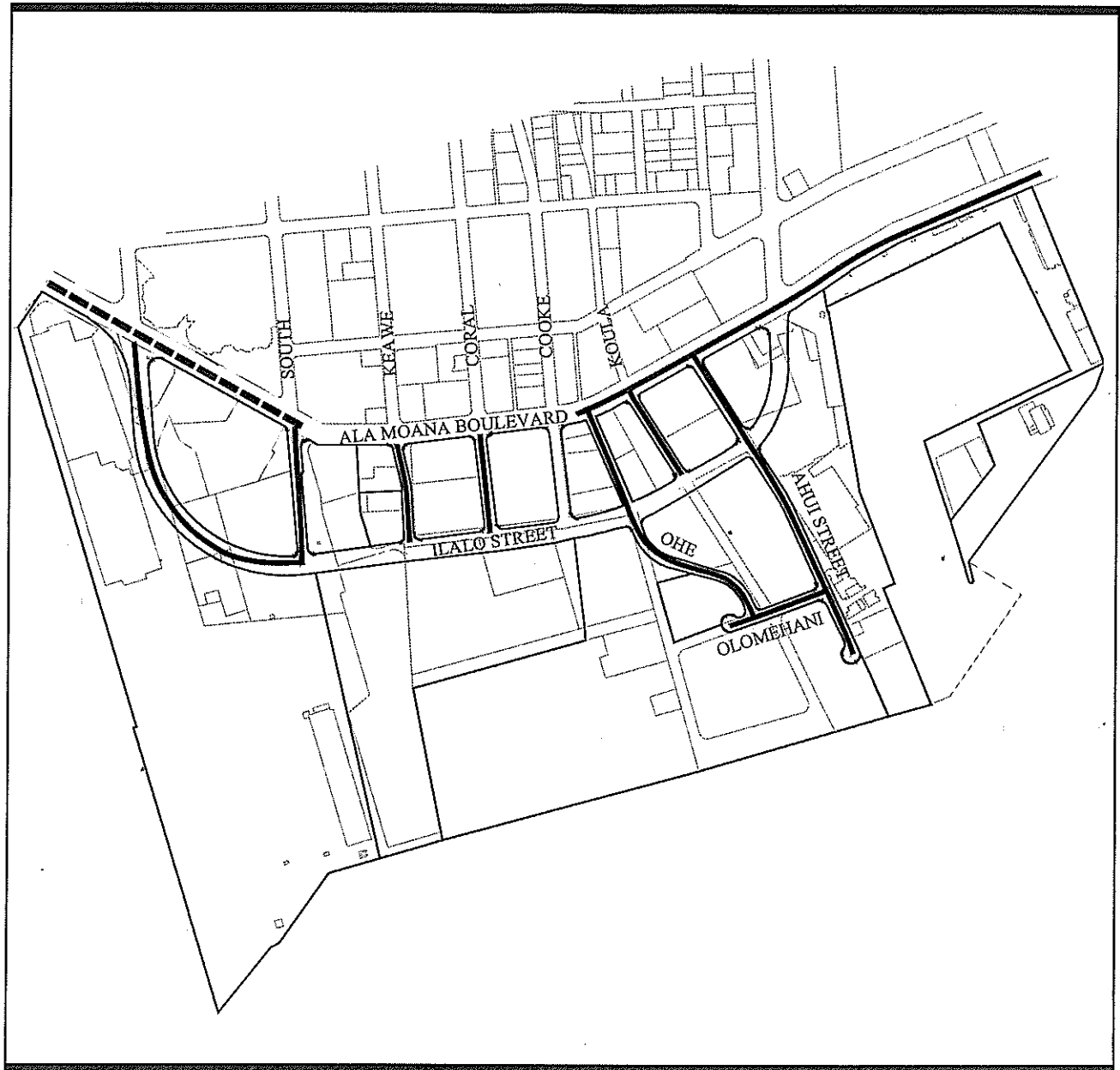
Electrical Power and Communication Systems

The electrical power and communication utilities, which serve Kakaako, are privately owned by HECO, Hawaiian Telephone Company Incorporated and Oceanic Cablevision. All overhead lines will be placed underground in concrete ductlines. Design of the

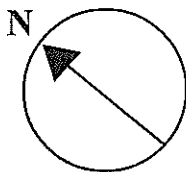
-  Existing Sewerlines
 Sewerlines to be Abandoned
 Proposed Sewerlines
 Existing Pump Station

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LEGEND:



- Proposed Underground Electrical (kV),
Telephone, Fiberoptic, and Cable lines
- - - - - Existing Underground Electrical (kV),
Telephone, Fiberoptic, and Cable lines

Figure V-4
**Proposed Electrical and
Communication Systems**

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improvements will conform to the standards of the utility company that owns the system. Construction of proposed underground power and communication lines on Ala Moana Boulevard will be accomplished as a Mauka Area project, and the cost to underground existing overhead utilities will be assessed to adjoining Makai Area properties in accordance with improvement district rules.

In the event that demands within the Makai Area warrant it, a new substation (funded by HECO) may be required to meet projected power requirements. HECO's policy is to increase system service capacity only when the need arises or when future loads can be anticipated with reasonable certainty. HCDA will coordinate the timing and location of the substation with HECO.

Costs for modifications to existing substations and costs associated with adding and extending lines from the substation due to increase in loads are to be paid by HECO. The existing overhead and underground facilities that are in conflict with the Plan will be removed or relocated to conform to the new layout. New construction cost will be shared for conduits and other appurtenances to relocate existing overhead facilities to new underground systems within the public rights-of-way. The funding will be shared between the government, HECO, and the property owner or developer. The property owner or developer will be responsible for HECO's service charges to individual lots.

Telephone and cable TV lines will run adjacent to the electric lines within underground ducts buried in the roadways. Approximately 7,070 feet of underground conduits will need to be installed. This does not include the conduits along Ala Moana Boulevard which are included in the Mauka Area Plan. Costs to relocate existing overhead telephone lines and facilities within the area will be shared by the telephone company, the government, and the property owner or developer. Individual service costs to the customer or developer will be borne by the telephone company and the customer. All costs to relocate existing underground lines, and to provide additional electrical and telephone facilities within public right-of-ways, will be borne solely by the applicable utility company.

In addition to telephone and cable TV lines, a state-of-the-art telecommunication infrastructure system is being planned for the Makai Area. Approximately 7,070 linear feet of underground conduits are being planned as part of the overall infrastructure improvements to the Makai Area. It is envisioned that the non-utility owned conduit systems will be "installation ready" for private access providers to establish fiberoptic networks to support commercial developments in the Makai Area.

Street Lighting and Traffic Signal Systems

Street lights are located throughout Kakaako along public roadways, and the system is owned and maintained by the City and County of Honolulu. In order to make Kakaako safe and attractive, street lights will be installed as part of all new and improved roadways.

Traffic signalization in the Makai Area is presently located at street intersections along Ala Moana Boulevard. These facilities are owned and maintained by the State of Hawaii. Signal systems will be added or modified as required by improvements and as approved by the appropriate State or county agency.

Proposed improvements to the electrical, communication, street lighting and traffic signal systems are shown in *Figure V-4*. The total cost of electrical power, communication, street lighting and traffic signal systems in the Makai Area is estimated to be approximately \$11.95 million.

5.6 Support Services

Police and Fire

Police protection services are provided by the Honolulu Police Department. The Makai Area is located within the Metropolitan Police District 1 which extends from Hawaii Kai to Pearl City. District 1 headquarters is located on Hotel Street between Beretania and King Streets. Fire service is provided through the Honolulu Fire Department's Kakaako, Pawaa, and Central Stations.

Medical Services

Major medical services in the vicinity of Kakaako include Queen's Medical Center located on Punchbowl Street, Straub Clinic and Hospital located on King Street and Ward Avenue, and the Kaiser Permanente Medical Center's Honolulu Clinic on Pensacola Street. The proximity of these major medical facilities indicates that adequate medical service will be available to Makai Area workers.

6.0 MAKAI AREA FINANCIAL PROGRAM

6.1 Economic Development

The Makai Area of Kakaako has the potential to generate tremendous public benefits for the community. The land is largely owned by the State, it contains substantial ocean frontage, and is centrally located between downtown Honolulu and Waikiki. While the overriding vision is to create an active, people-oriented place with generous public amenities, it is also important to recognize the potential of the Makai Area to contribute to economic development by facilitating the growth of new businesses and jobs.

The Makai Area must be seen as an opportunity to lead the State in new economic directions. A total of 5.7 of the 7.5 million square feet of building area allowed in the Makai Area is allocated to State-owned lands. This represents a considerable amount of building space to be absorbed. Development of these lands will require a public/private partnership that combines the resources, creativity, and expertise of both to determine the appropriate new uses for the available building density and to optimize economic development.

In order to implement the Makai Area Plan and to attract the requisite private development, substantial initial expenditures will need to be made by the public sector. The expenditures will be for infrastructure and public facilities that make it possible for private development to follow. Development of new roads and utilities at the interior of the Makai Area will allow land use densities to be increased; development of public facilities, such as parks and waterfront promenades, will attract private development to adjacent parcels. The result will

be increased economic activity, increased rent revenues to the State, and increased tax revenues to both the State and county.

6.2 Public Costs

Considerable public expenditure has already occurred in the Makai Area, principally for park construction and infrastructure improvements. Over the next 10-year period, the Makai Area Plan envisions further expenditures, principally for infrastructure development. A summary of past and projected construction expenditures by HCDA are presented below:

	<u>\$ Million</u>
<u>Past Costs:</u>	
Kewalo Basin Park & Facilities	\$ 3.0
Kakaako Waterfront Park	22.0
Incinerator Remediation	2.2
Kakaako Makai Gateway Park	6.7
Ward, Ilalo Improvements	<u>28.0</u>
Subtotal	<u>\$61.90</u>
<u>Projected Costs:</u>	
South, Punchbowl, Improvements	\$ 18.5
Koula, Coral, Keawe, Ohe, Olomehani Streets	15.2
Ahui Street	<u>6.3</u>
Subtotal	<u>\$ 40.00</u>
TOTAL CONSTRUCTION COSTS	\$101.90

6.3 Public Returns

The direct return to the State on public expenditures in the Makai Area includes increased ground rents, development fees, and excise taxes. There are also considerable indirect returns that are more difficult to measure, such as job creation, public amenities, and recreation opportunities. Unlike traditional development projects, it is difficult to weigh public investment against returns or investment. Nevertheless, it may be helpful to review the relationship of public construction costs and increased ground rent.

Ground rents can be anticipated from retail, restaurants, commercial, entertainment, and office space. The major public attractions, however, are expected to pay only nominal rents, and the park and public parking garages are not expected to generate any revenue. DOT-Harbors will continue to receive rents from piers, wharves, and the Fort Armstrong area in exchange for managing the maritime activities in those areas.

6.4 Public Financing Alternatives

To the extent that HCDA may not be able to capture and pledge a predictable and established revenue flow for a bond issue, or use special assessment bonds, it must rely on State general obligation bond funding, pay-as-you-go financing from project area revenue flows, and/or private funds to pay for public improvements. To reduce dependency on general obligation bond financing, several options are possible:

- Coordinating with the City and County with respect to sharing the "windfall" of increased property tax revenues from the planning area.
- Utilizing ground lease rentals for the following purposes: pay-as-you-go financing (thereby reducing future bonding requirements); broadening the revenue base of a public agency with existing bonding capabilities; or reimbursing a revolving fund, if one is established.
- Adopting legislation to increase the flexibility of levying special assessments or special taxes on the basis of more general benefit.

Pursuing the alternatives listed above will not completely eliminate the need for general obligation bond financing. However, HCDA may eventually be able to limit the use of general obligation bonds to those facilities which provide a more regional benefit, such as parks, or which have no other financing alternative.

6.5 Cost/Benefit

In spite of the fact that new development in the Makai Area requires relocation and upfront costs, such as infrastructure improvements, the long term benefits are substantial. Construction expenditures for infrastructure, commercial development and public amenities translate into significant construction jobs. The shift from large, land-intensive uses to more productive development brings with it a dramatic increase in permanent jobs supported by the land.

In addition to the direct economic benefits, development provides an opportunity to attract new, diversified markets to Honolulu and to build an outstanding public environment with parks and open space. The land value is potentially tremendous, the site is ideally suited for the proposed new use, and the area can act as a catalyst for the development of urban Honolulu and the State economy in the 21st century.

7.0 PUBLIC FACILITIES PLAN

Chapter 206E, Hawaii Revised Statutes, mandates that "... Public facilities within the district shall be planned, located and developed so as to support the redevelopment policies for the district ...". Therefore, to implement the redevelopment policies of the Makai Area Plan, a broad range of public facilities will be necessary.

The public facilities necessary to implement the redevelopment policies of the Makai Area Plan are detailed in the Transportation Systems, Urban Design and Infrastructure sections of the Plan. Public facilities by definition include streets, utility and service corridors, utility lines, sites for schools, parks, parking garage, sidewalks, pedestrianways, community facilities, public highways, storm drainage systems, water systems, street lighting systems, off-street parking facilities and sanitary sewerage systems.

The Public Facilities Plan anticipates providing for such public facilities through the following means:

- The district-wide improvement or "Improvement District" program. The Improvement District program provides a method whereby public facilities development costs are shared among government, private property owners, and public utilities that receive special benefits from such public facilities. This funding mechanism may be used for all public facilities, although its focus has traditionally been on transportation systems and infrastructure.
- Government-funded construction of public facilities. Direct funding of certain public facilities by government can be provided through several means including the State of Hawaii's Capital Improvement Program, public facilities revenue bonds issued by HCDA, and/or rental revenues generated through property leasing by HCDA. These funding mechanisms are intended to provide for major parks and public activity areas, and other public facilities that generate direct revenues to support bond financing.
- Assessment of developers for the costs of certain public facilities that have a direct relationship or benefit to such new development. Chapter 206E-12, Hawaii Revised Statutes, mandates that "... The authority shall establish rules requiring dedication for public facilities of land or facilities, or cash payments in lieu thereof, by developers as a condition of development" This funding mechanism is intended to provide for public facilities needs that are generated by new development as established by the policies of the Makai Area Plan. These public facilities may include certain improvements to parks, public plazas and walkways, public activity areas and public parking.
- Private development of public facilities through development rules and incentives. Development rules and incentives that provide for certain public facilities include provisions regulating urban design, public open space and activity areas, arcades and pedestrianways.

In order to achieve the objectives of the Public Facilities Plan, the redevelopment policies of the Makai Area Plan as detailed in the Transportation Systems, Urban Design and Infrastructure sections and the means discussed above to provide for public facilities shall serve as a guide for implementation of the Public Facilities Plan. All agencies of the State of Hawaii or county shall consult with the Authority at the project planning stage prior to the construction, renovation or improvement of any public facility within the Makai Area.

8.0 IMPLEMENTATION

The development strategy for public lands in the Makai Area described in the preceding chapter requires HCDA to play a role that is more entrepreneurial than custodial and regulatory. Neither public nor private interests alone can implement the strategy. HCDA must take the lead in identifying suitable private sector partners, defining terms and conditions, directing public improvements, and ensuring private performance.

8.1 General Phasing

An overall phasing program that considers lease terms, funding requirements, and achievable revenue streams has been developed. The configuration of the Plan permits a flexible phasing program, from single to multiple blocks, depending on demand. Planned redevelopment of the Kewalo waterfront and expiration of existing leases in the central area of the site will encourage a general Diamond Head-Ewa direction for phasing.

Public projects in the first phase include:

- Roadway improvements and new utilities along Koula (between Ala Moana Boulevard and Ilalo Street), Ahui, Cooke, Coral, Ohe, Olomehani and Keawe Streets.
- Construction of the John A. Burns School of Medicine.

Potential private and non-profit projects in the first phase include:

- A retail and restaurant complex at Kewalo Basin.
- Technology, biotechnology, commercial and education offices.

8.2 Relocation

In spite of the fact that many of the leases on public land are held by public agencies, in the course of development some private businesses will be displaced. Relocation assistance is available, and the size and nature of relocation services and payments are regulated by HCDA in accordance with Chapter 15-24, Hawaii Administrative Rules. Guiding principles are summarized below:

- Minimize disruption caused by redevelopment.
- Ensure that businesses are, to the extent possible, properly relocated before permitting displacement by new development.
- Minimize or ameliorate serious negative impacts on displacees, such as loss of employment, business, or monetary losses.
- Provide counseling, information and referral services to displacees affected by private sector actions, induced or stimulated by governmental planning decisions.

Possible displacements and relocations anticipated at this time include the following:

Kewalo Basin

The Kewalo Basin Marine Mammal Laboratory, the Fisherman's Wharf Restaurant, and the Kewalo Shipyard are expected to be displaced from Kewalo Basin. As stated previously, the Kewalo Marine Mammal Laboratory and National Marine Fisheries Service research laboratory may be incorporated in a new aquarium and ocean research facility in the central Makai Area.

Central Area of the Kakaako Peninsula

The City and County Corporation Baseyards are expected be relocated to areas outside the Kakaako District.

8.3 Project Implementation

There are several types of projects that will be implemented in the Makai Area. All projects will be coordinated so that the sequence of development is logical and that the public benefits are balanced with private development activity.

8.3.1 Infrastructure

Infrastructure will be developed according to methods previously used in the Kakaako Community Development District for Improvement District construction. Improvements to the infrastructure will be undertaken in increments that are cost-efficient, on a scale large enough to be of significant benefit to the properties they serve. All infrastructure improvements will be coordinated to minimize disruptions to the area. For example, the construction of a roadway segment also will include the construction of drainage, wastewater, water, and other improvements required along the roadway. New development will follow the upgraded infrastructure.

8.3.2 Parks

With approximately 46.2 acres of park developed, significant attention will be paid to park enhancement. In order for park facilities to continue to meet community needs, the design phase for each area will include a review of recreational and cultural requirements.

8.3.3 Privately Initiated Projects for the Public

A number of projects that will benefit the public are anticipated to be initiated by community non-profit organizations. Appropriate proposals for cultural and educational uses will be reviewed and supported by HCDA in order to increase the public activities available in the Makai Area. Funding for these projects is assumed to be from private sources, but may also include governmental support where deemed appropriate.

8.3.4 Public and Private Development Projects

Construction of public and private development projects is anticipated to be ongoing in the Makai Area for many years. These projects will take two primary forms. The first is private development on private land. Projects are required to conform to appropriate Makai Area Plan and Rules, and will require HCDA approval.

The majority of the projects in the Makai Area belong to the second type, which are projects privately financed and constructed on public lands. In this case, HCDA will take the lead in soliciting appropriate proposals. Typically, the process will include the following steps:

- Solicitation of Interest and Qualifications. Projects are announced publicly with attendant requests for expressions of interest which describe planned public improvements, types of private developers sought, and development schedules. Qualified respondents are then sent a request for qualifications, asking them to describe the project team, their relevant experience and their financial strategy.
- Request for Proposals. After further evaluation, a request for proposals (RFP) is issued. While requirements for proposals vary, the most successful include a detailed program, a conceptual design, proposed terms, and a financial statement.
- Proposal Review. Proposals are then reviewed, and a developer is selected pending agreement on final terms and conditions. Fulfillment of pre-construction conditions will then secure a lease for the property, and construction can begin.

Private projects developed on public lands are also required to conform to the Makai Area Plan and Rules.

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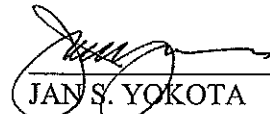
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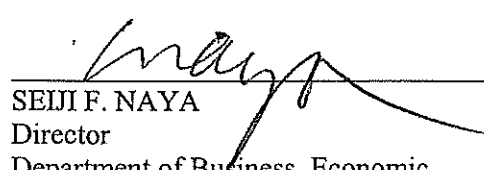
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The Makai Area Plan was adopted on November 13, 2002, following a public hearing held on November 13, 2002, after public notice was given in the Honolulu Star-Bulletin, West Hawaii Today, Hawaii Tribune-Herald, The Maui News, and The Garden Island, on October 14, 2002.

This plan shall take effect upon approval.



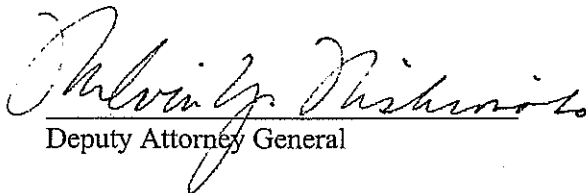
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APPROVED AS TO FORM:



Deputy Attorney General



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Date: NOV 27 2002